
Impact of Covid-19 on incidence, survival and mortality of unknown primary cancer in Northern Ireland

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

Further information

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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

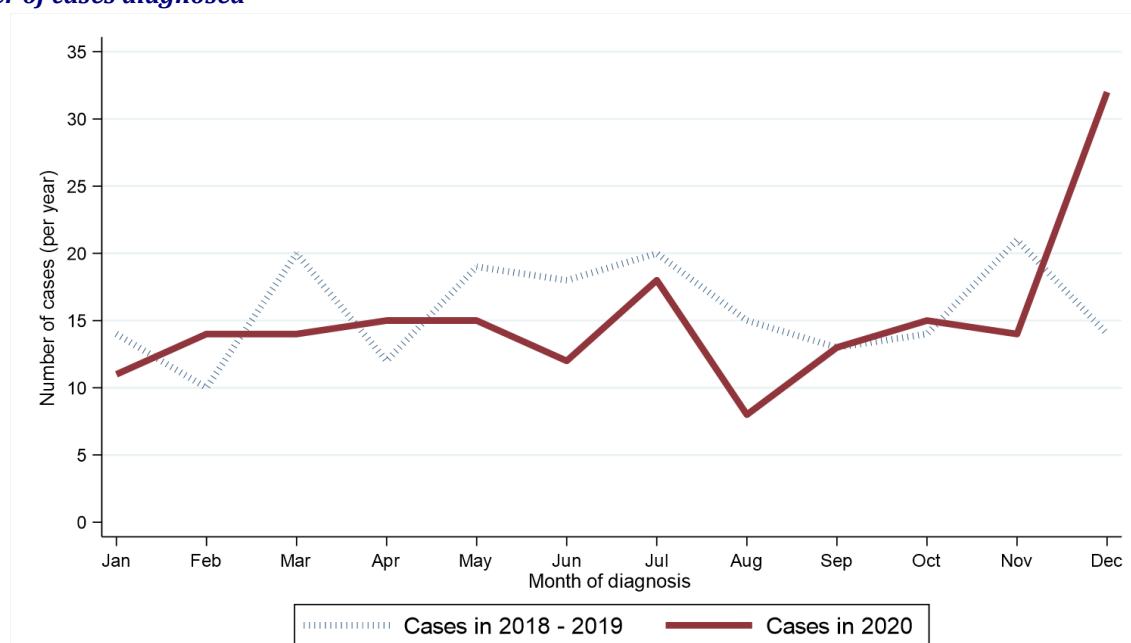
During the April-December period when Covid-19 was present the number of cases of unknown primary cancer diagnosed decreased by 1.4% (2 patients) from 144 per year in 2018 - 2019 to 142 in 2020.

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

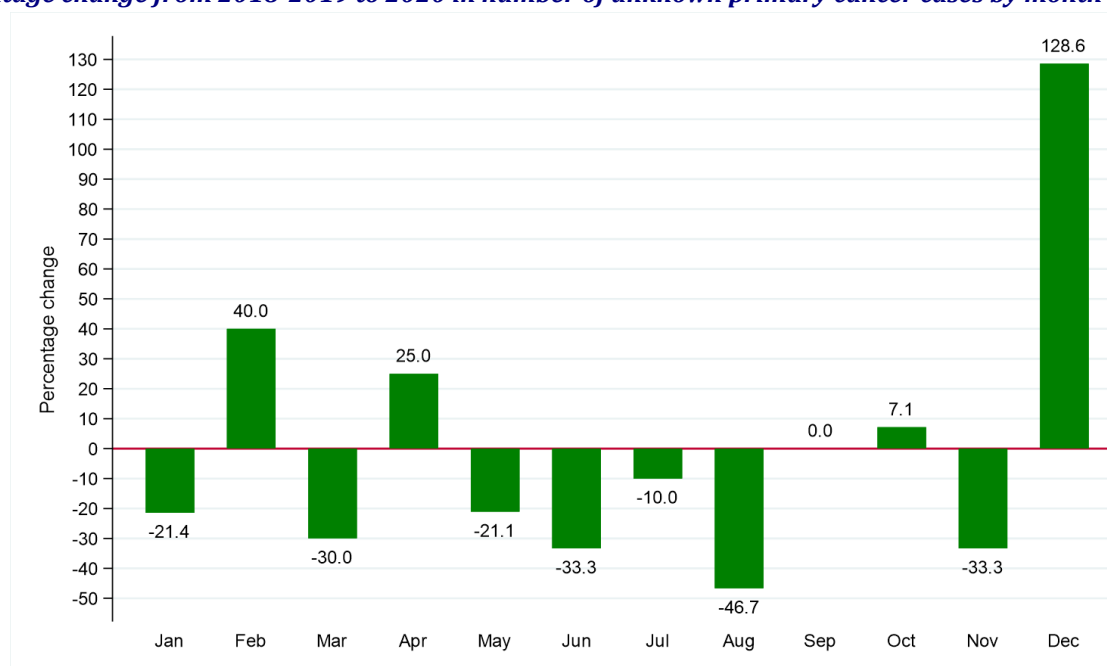
Period of diagnosis	Annual total	Month diagnosed											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
2018-2019*	187	14	10	20	12	19	18	20	15	13	14	21	14
2020	181	11	14	14	15	15	12	18	8	13	15	14	32

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

Figure 1: Number of unknown primary 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 unknown primary cancer cases by month of diagnosis



GENDER

Excluding the first quarter of each year among males the number of cases of unknown primary cancer diagnosed increased by 3.0% from 66 per year in 2018 - 2019 to 68 in 2020. Between the same two time periods the number of cases among females decreased by 6.3% from 79 per year to 74. The change in case distribution by gender between 2018 - 2019 and 2020 was not statistically significant.

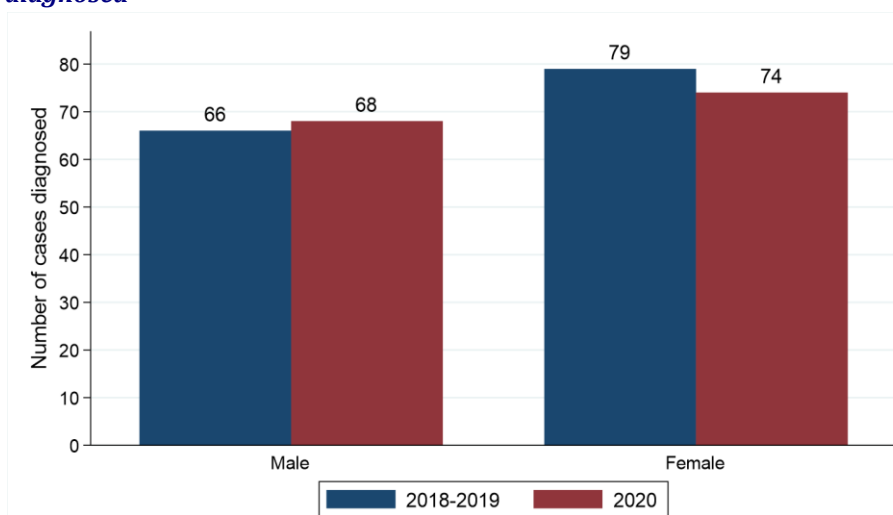
Table 2: Number and proportion of unknown primary cancer cases diagnosed in April-December of 2018-2020 by gender and period of diagnosis

Gender	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Male	66 (45.8%)	68 (47.9%)	+3.0% (2 patients)
Female	79 (54.9%)	74 (52.1%)	-6.3% (5 patients)
All persons	144	142	-1.4% (2 patients)

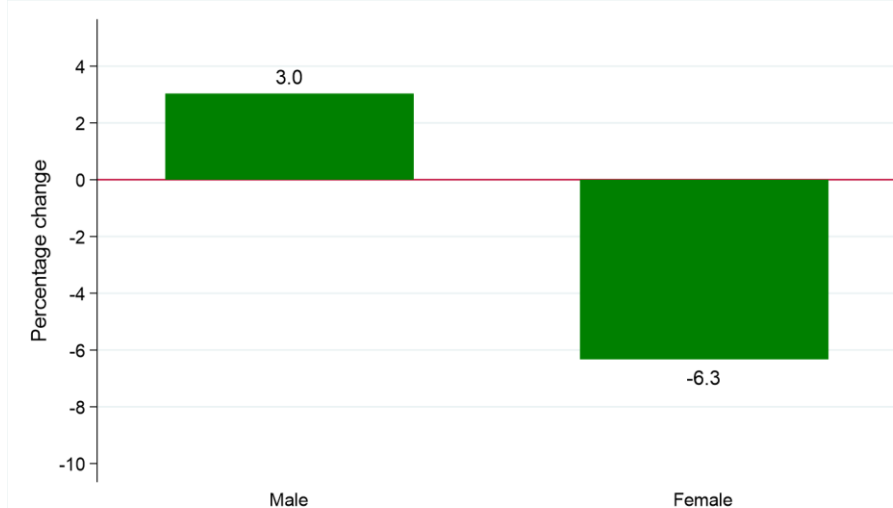
* Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.

Figure 2: Unknown primary 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 unknown primary cancer cases by gender



AGE

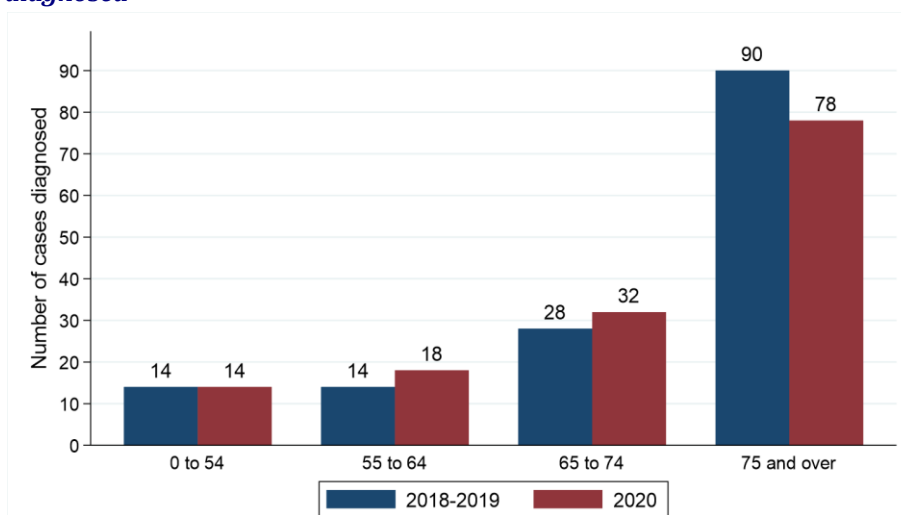
Excluding the first quarter of each year among people aged 75 and over the number of cases of unknown primary cancer diagnosed decreased by 13.3% from 90 per year in 2018 - 2019 to 78 in 2020. Between the same two time periods, the number of cases among people aged 55 to 64 increased by 28.6% from 14 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 unknown primary cancer cases diagnosed in April-December of 2018-2020 by age and period of diagnosis

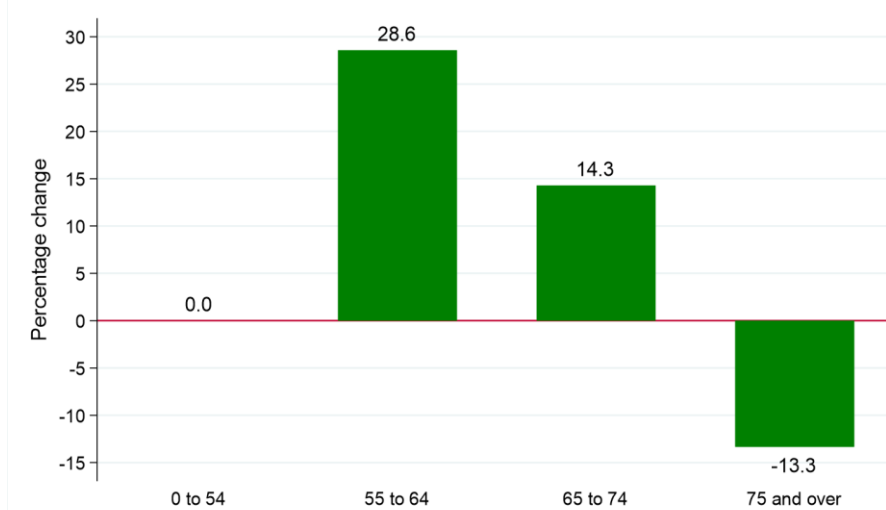
Age group	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
0 to 54	14 (9.7%)	14 (9.9%)	0.0% (0 patients)
55 to 64	14 (9.7%)	18 (12.7%)	+28.6% (4 patients)
65 to 74	28 (19.4%)	32 (22.5%)	+14.3% (4 patients)
75 and over	90 (62.5%)	78 (54.9%)	-13.3% (12 patients)
All ages	144	142	-1.4% (2 patients)

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

Figure 3: Unknown primary 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 unknown primary cancer cases by age at diagnosis



HEALTH AND SOCIAL CARE TRUST

Excluding the first quarter of each year among residents of Western HSCT the number of cases of unknown primary cancer diagnosed decreased by 20.8% from 24 per year in 2018 - 2019 to 19 in 2020. Between the same two time periods the number of cases among residents of South Eastern HSCT increased by 20.0% from 25 per year to 30. The change in case distribution by HSCT between 2018 - 2019 and 2020 was not statistically significant.

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

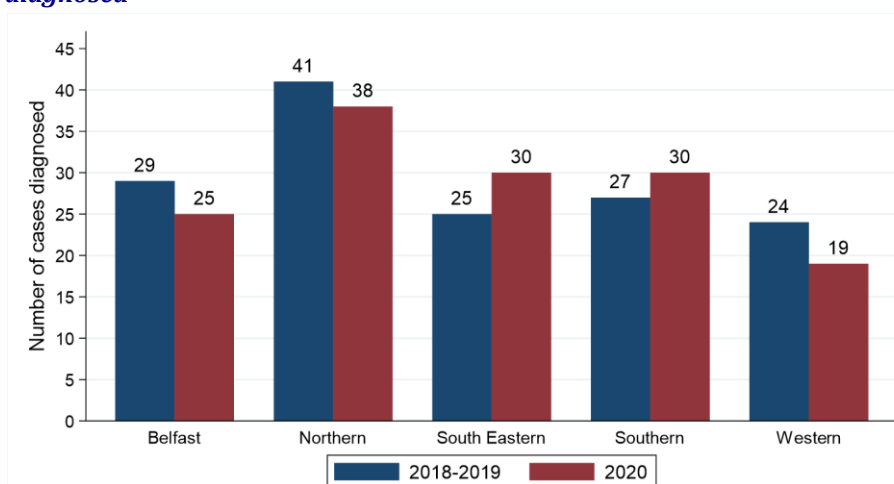
Health and Social Care Trust	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Belfast HSCT	29 (20.1%)	25 (17.6%)	-13.8% (4 patients)
Northern HSCT	41 (28.5%)	38 (26.8%)	-7.3% (3 patients)
South Eastern HSCT	25 (17.4%)	30 (21.1%)	+20.0% (5 patients)
Southern HSCT	27 (18.8%)	30 (21.1%)	+11.1% (3 patients)
Western HSCT	24 (16.7%)	19 (13.4%)	-20.8% (5 patients)
Northern Ireland	144	142	-1.4% (2 patients)

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

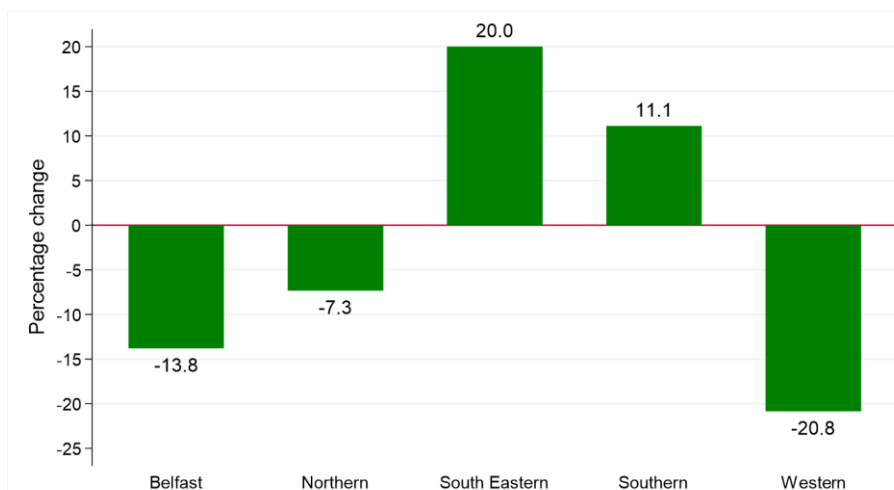
Note: Cases with unknown Health and Social Care Trust are included in totals

Figure 4: Unknown primary 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 unknown primary 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 unknown primary cancer diagnosed decreased by 25.7% from 35 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 8.7% from 23 per year to 21. The change in case distribution by deprivation quintile between 2018 - 2019 and 2020 was not statistically significant.

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

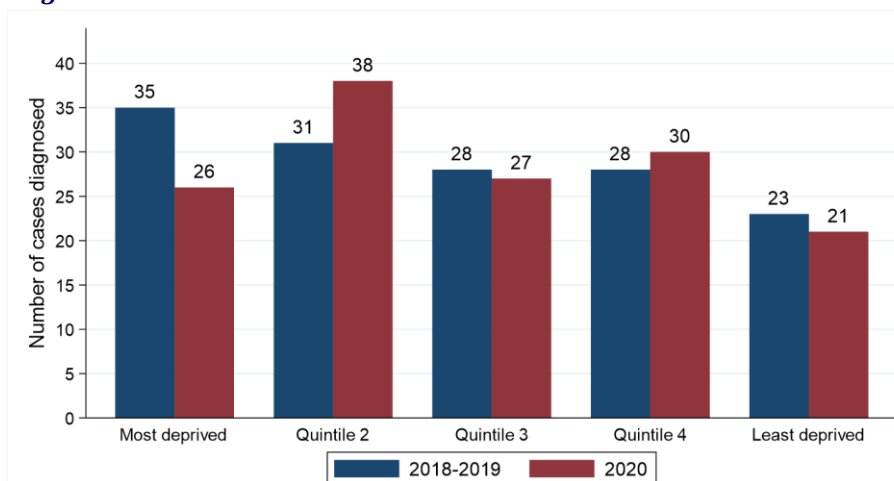
Deprivation quintile	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Most deprived	35 (24.3%)	26 (18.3%)	-25.7% (9 patients)
Quintile 2	31 (21.5%)	38 (26.8%)	+22.6% (7 patients)
Quintile 3	28 (19.4%)	27 (19.0%)	-3.6% (1 patient)
Quintile 4	28 (19.4%)	30 (21.1%)	+7.1% (2 patients)
Least deprived	23 (16.0%)	21 (14.8%)	-8.7% (2 patients)
Northern Ireland	144	142	-1.4% (2 patients)

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

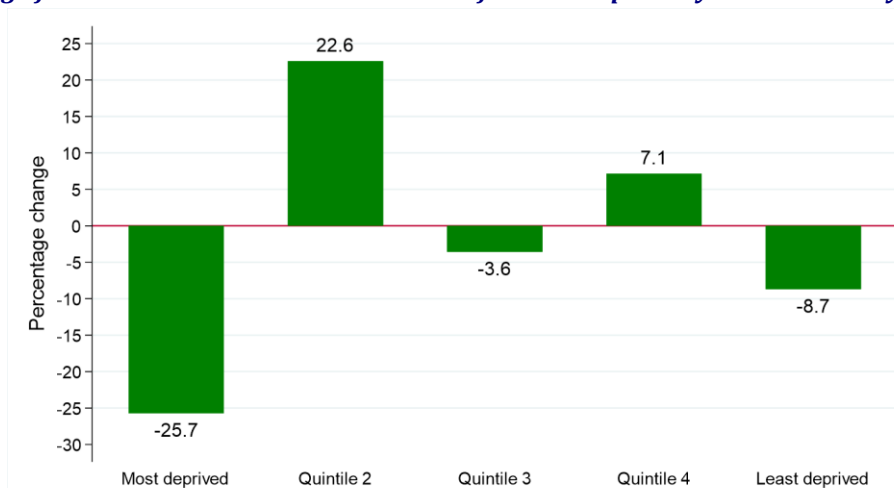
Note: Cases with unknown deprivation quintile are included in totals

Figure 5: Unknown primary 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 unknown primary cancer cases by deprivation quintile



BASIS OF DIAGNOSIS

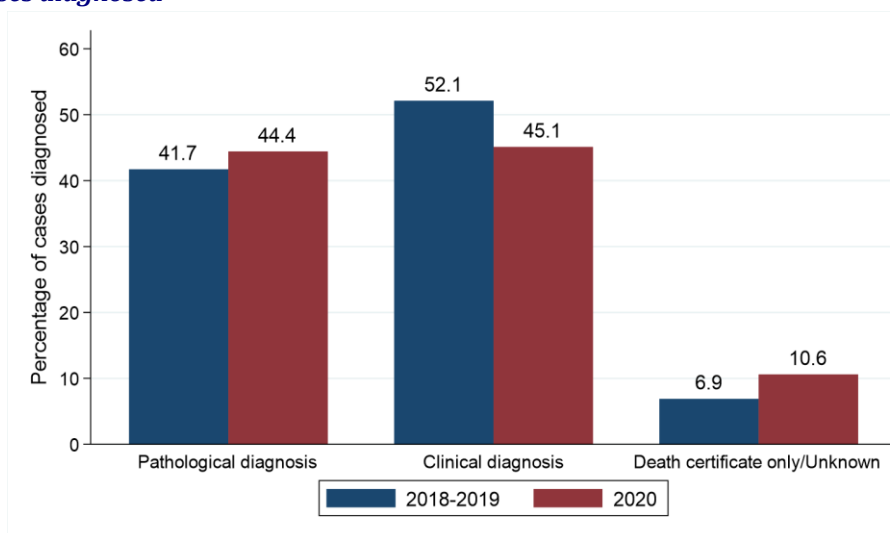
Excluding the first quarter of each year the number of unknown primary cancer cases diagnosed pathologically increased by 5.0% from 60 per year in 2018 - 2019 to 63 in 2020, while the number of cases diagnosed clinically decreased by 14.7% from 75 per year to 64. The change in case distribution by basis of diagnosis between 2018 - 2019 and 2020 was not statistically significant.

Table 6: Number and proportion of unknown primary cancer cases diagnosed in April-December of 2018-2020 by basis and period of diagnosis

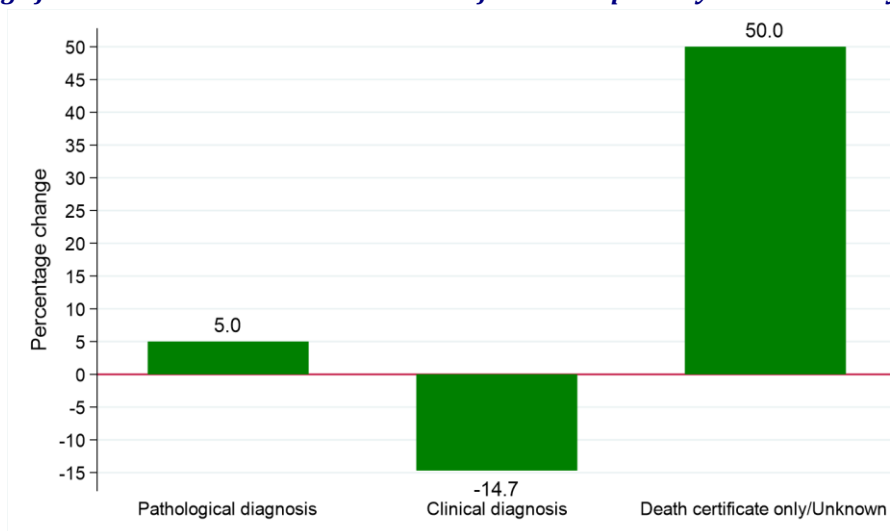
Basis of diagnosis	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Pathological diagnosis	60 (41.7%)	63 (44.4%)	+5.0% (3 patients)
Clinical diagnosis	75 (52.1%)	64 (45.1%)	-14.7% (11 patients)
Death certificate only/Unknown	10 (6.9%)	15 (10.6%)	+50.0% (5 patients)
All groups	144	142	-1.4% (2 patients)

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

Figure 6: Unknown primary cancer cases diagnosed in April-December of 2018-2020 by basis and period of diagnosis
(a) Proportion of cases diagnosed



(b) Percentage change from 2018-2019 to 2020 in number of unknown primary cancer cases by basis of diagnosis



METHOD OF HOSPITAL ADMISSION

Excluding the first quarter of each year the number of cases of unknown primary cancer where the patient had an emergency admission recorded as the most recent hospital admission type up to 30 days prior to diagnosis decreased by 16.5% from 79 per year in 2018 - 2019 to 66 in 2020. The change in case distribution by hospital admission type between 2018 - 2019 and 2020 was not statistically significant.

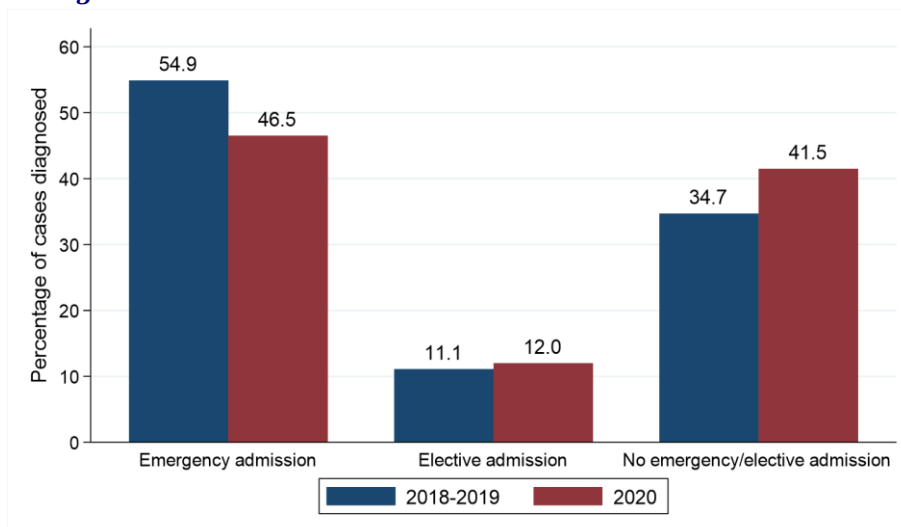
Table 7: Number and proportion of unknown primary cancer cases diagnosed in April-December of 2018-2020 by method of admission to hospital and period of diagnosis

Method of admission to hospital	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Emergency admission	79 (54.9%)	66 (46.5%)	-16.5% (13 patients)
Elective admission	16 (11.1%)	17 (12.0%)	+6.3% (1 patient)
No emergency/elective admission recorded	50 (34.7%)	59 (41.5%)	+18.0% (9 patients)
All persons	144	142	-1.4% (2 patients)

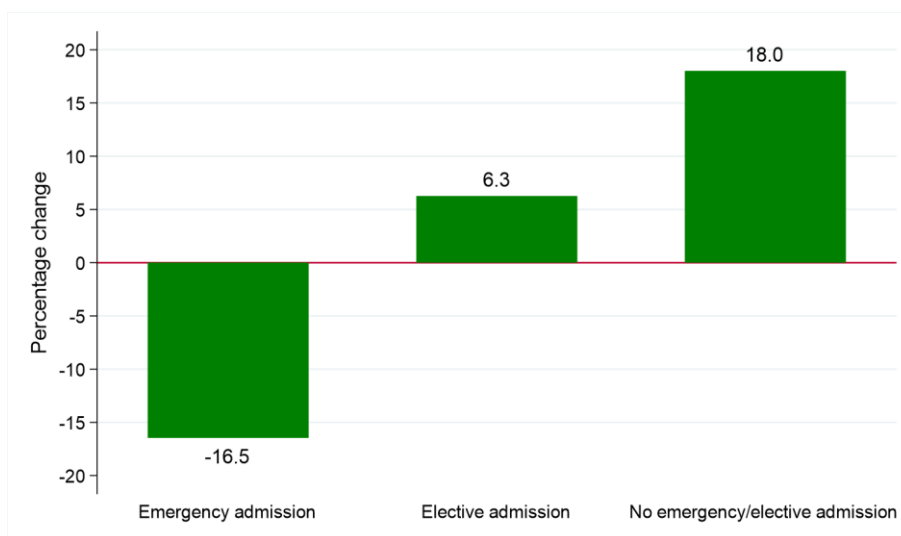
* Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.

Figure 7: Unknown primary 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 unknown primary cancer cases by method of admission to hospital



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

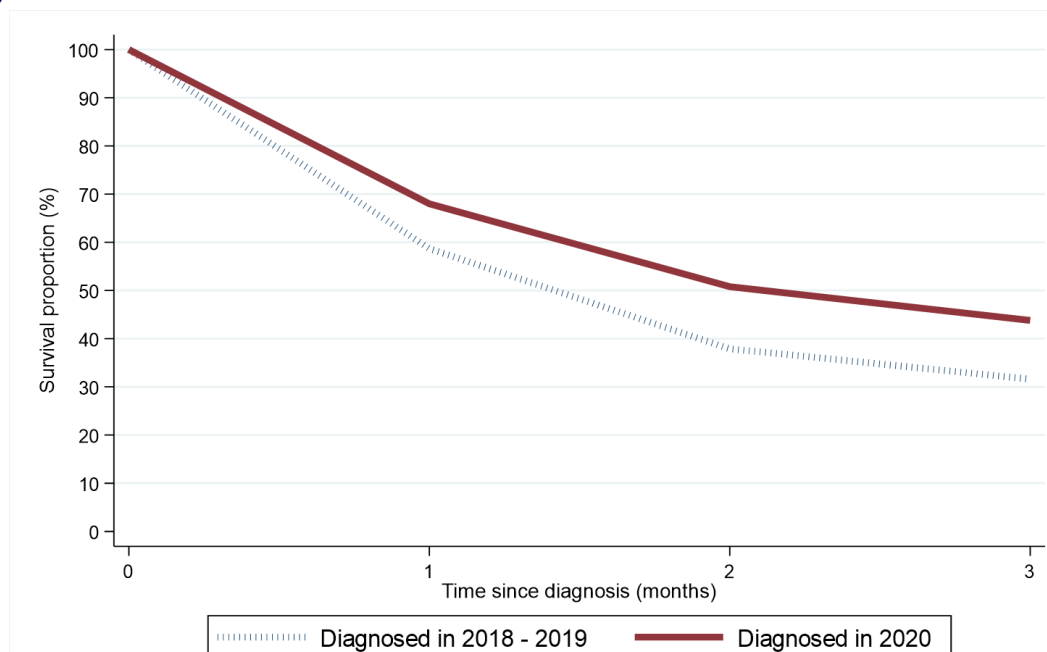
Survival among unknown primary cancer patients one month after diagnosis increased from 58.7% among those diagnosed in April-December of 2018 - 2019 to 68.0% among those diagnosed in April-December of 2020. This change was not statistically significant. Between the same two diagnosis periods, three-month survival increased from 31.6% to 43.8%. This change was not statistically significant.

Table 8: Observed survival for patients with unknown primary cancer diagnosed in April-December of 2018-2020 by period of diagnosis

Survival time	Period of diagnosis (Apr-Dec)	
	2018-2019	2020
1 month	58.7% (52.6% - 64.4%)	68.0% (59.1% - 75.3%)
2 months	37.9% (32.1% - 43.7%)	50.8% (41.8% - 59.0%)
3 months	31.6% (26.1% - 37.2%)	43.8% (35.0% - 52.1%)

No statistically significant reductions

Figure 8: Observed survival for patients with unknown primary 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 unknown primary cancer patients diagnosed at any point since 1993.

NET SURVIVAL

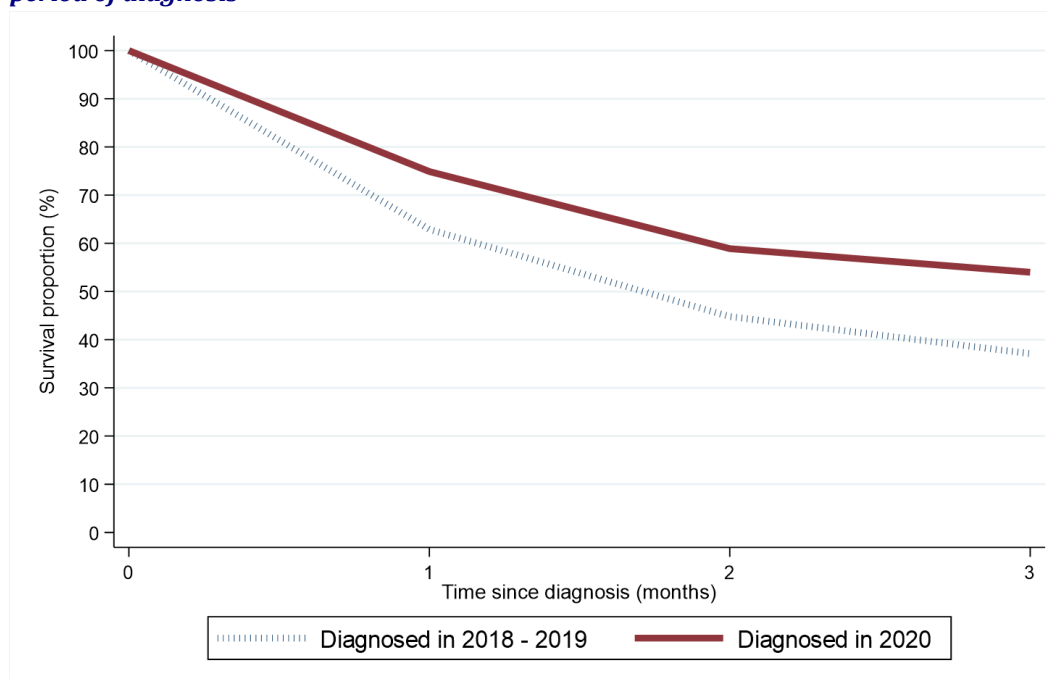
Age-standardised net survival (which takes account of deaths from other causes such as Covid-19) among unknown primary cancer patients one month after diagnosis increased from 62.9% among those diagnosed in April-December of 2018 - 2019 to 74.9% among those diagnosed in April-December of 2020. This change was not statistically significant. Between the same two time periods, three-month age-standardised net survival increased from 37.1% to 54.0%. This change was statistically significant.

Table 9: Age-standardised net survival for patients with unknown primary cancer diagnosed in April-December of 2018-2020 by period of diagnosis

Survival time	Period of diagnosis (Apr-Dec)	
	2018-2019	2020
1 month	62.9% (56.6% - 69.9%)	74.9% (67.8% - 82.8%)
2 months	44.8% (38.3% - 52.4%)	58.9% (50.6% - 68.5%)
3 months	37.1% (30.9% - 44.6%)	54.0% (45.5% - 64.0%)

No statistically significant reductions

Figure 9: Age-standardised net survival for patients with unknown primary cancer diagnosed in April-December of 2018-2020 by period of diagnosis



CANCER MORTALITY

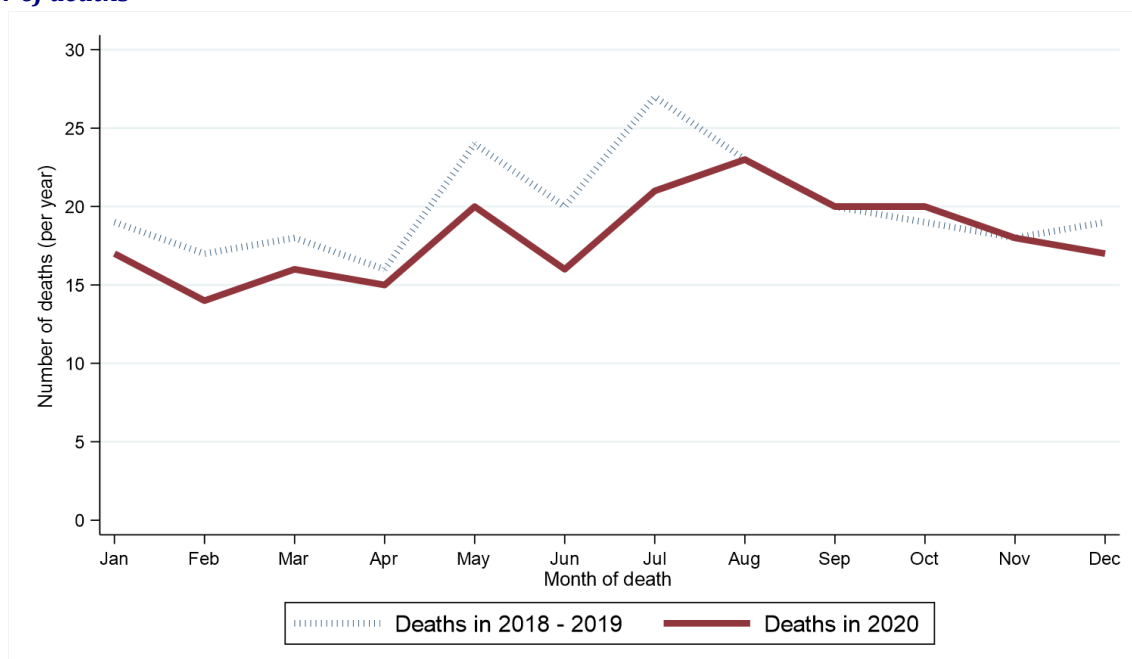
During the April-December period when Covid-19 was present the number of deaths from unknown primary cancer decreased by 7.6% from 184 per year in 2018 - 2019 to 170 in 2020.

Table 10: Number of unknown primary 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*	237	19	17	18	16	24	20	27	23	20	19	18	19
2020	217	17	14	16	15	20	16	21	23	20	20	18	17

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

Figure 10: Number of unknown primary 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 unknown primary cancer deaths by month of death

