
Impact of Covid-19 on incidence, survival and mortality of cancer among older people 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

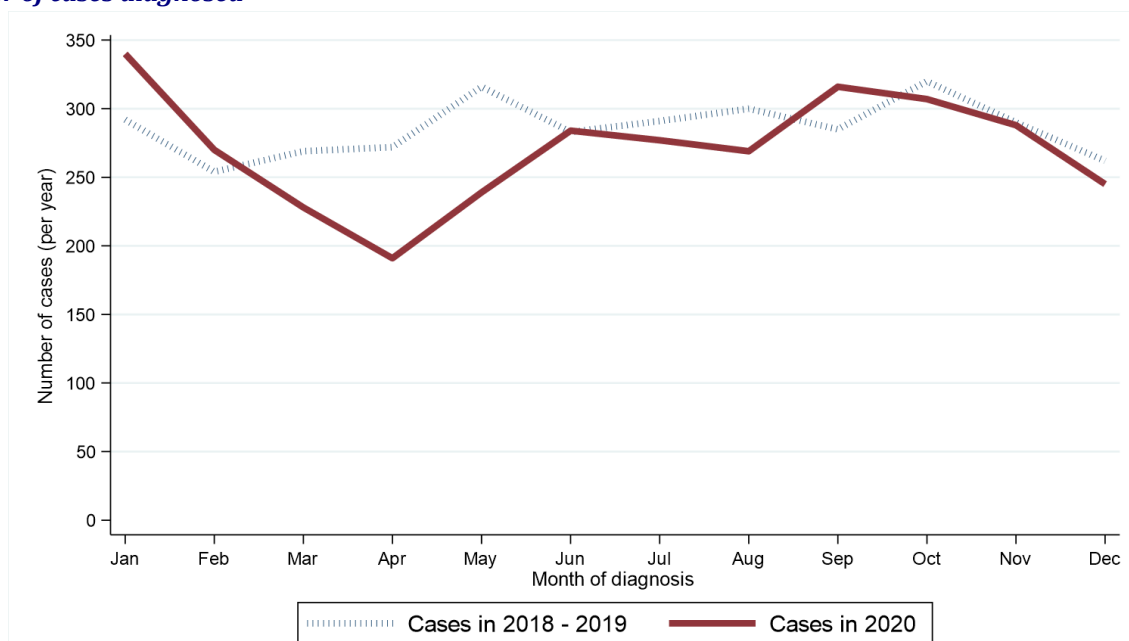
During the April-December period when Covid-19 was present the number of cases of cancer diagnosed among older people decreased by 7.7% (201 patients) from 2,617 per year in 2018 - 2019 to 2,416 in 2020.

Table 1: Number of cancer cases among older people diagnosed in 2018-2020 by month and year of diagnosis

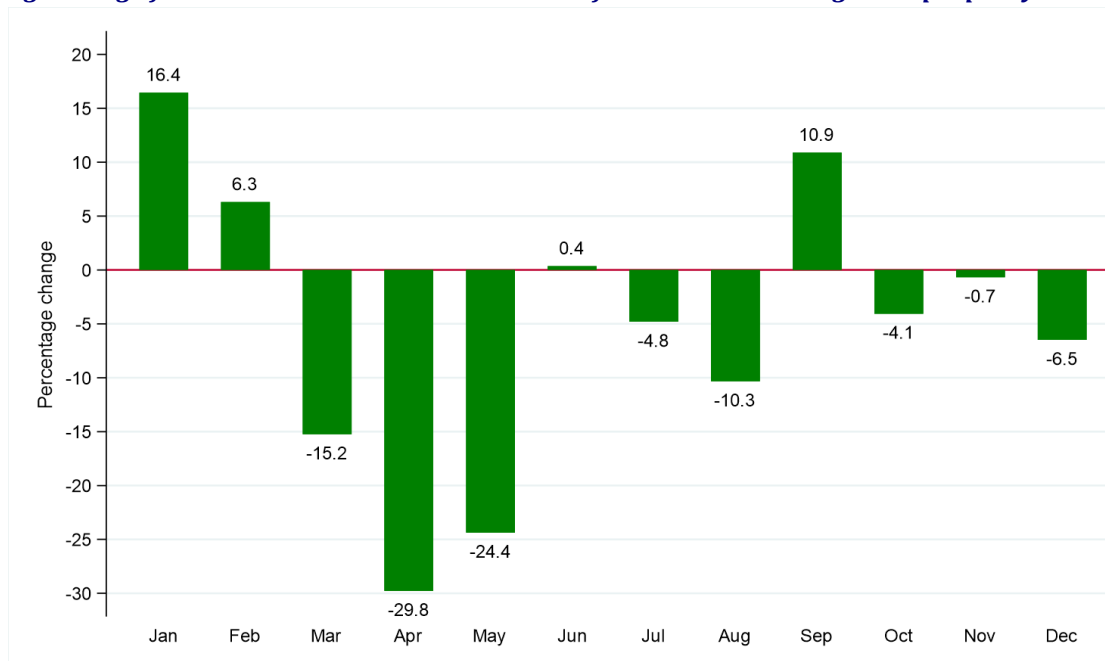
Period of diagnosis	Annual total	Month diagnosed											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
2018-2019*	3,431	292	254	269	272	316	283	291	300	285	320	290	262
2020	3,254	340	270	228	191	239	284	277	269	316	307	288	245

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

Figure 1: Number of cancer cases diagnosed among older people 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 cancer cases among older people by month of diagnosis



GENDER

Excluding the first quarter of each year among males the number of cases of cancer diagnosed among older people decreased by 6.9% from 1,391 per year in 2018 - 2019 to 1,295 in 2020. Between the same two time periods the number of cases among females decreased by 8.6% from 1,226 per year to 1,121. The change in case distribution by gender between 2018 - 2019 and 2020 was not statistically significant.

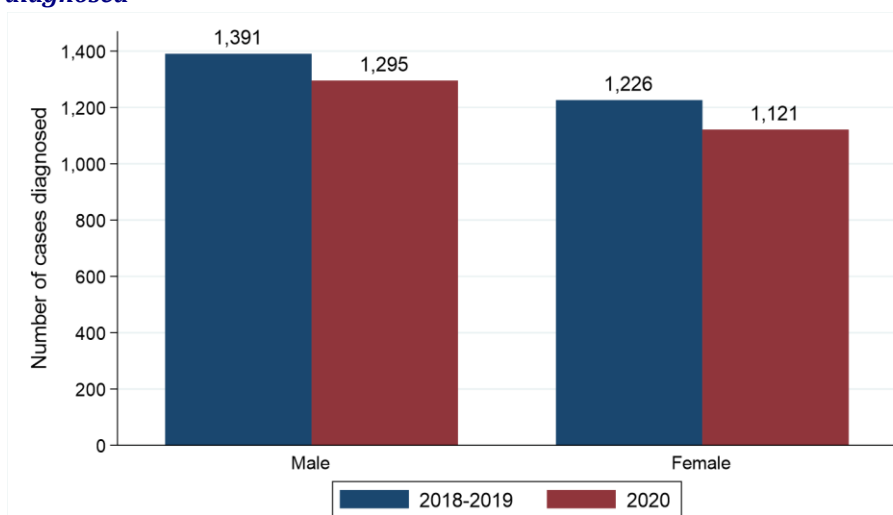
Table 2: Number and proportion of cancer cases among older people in April-December of 2018-2020 by gender and period of diagnosis

Gender	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Male	1,391 (53.2%)	1,295 (53.6%)	-6.9% (96 patients)
Female	1,226 (46.8%)	1,121 (46.4%)	-8.6% (105 patients)
All persons	2,617	2,416	-7.7% (201 patients)

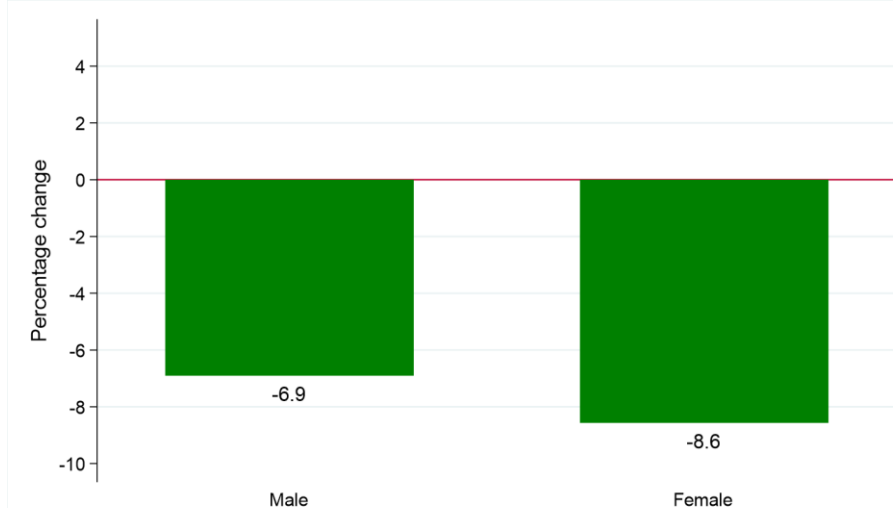
* Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.

Figure 2: Cancer cases among older people 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 cancer cases among older people by gender



HEALTH AND SOCIAL CARE TRUST

Excluding the first quarter of each year among residents of Belfast HSCT the number of cancer cases diagnosed among older people decreased by 13.9% from 534 per year in 2018 - 2019 to 460 in 2020. Between the same two time periods the number of cases among residents of South Eastern HSCT decreased by 1.9% from 539 per year to 529. The change in case distribution by HSCT between 2018 - 2019 and 2020 was not statistically significant.

Table 3: Number and proportion of cancer cases among older people diagnosed in April-December of 2018-2020 by Health and Social Care Trust and period of diagnosis

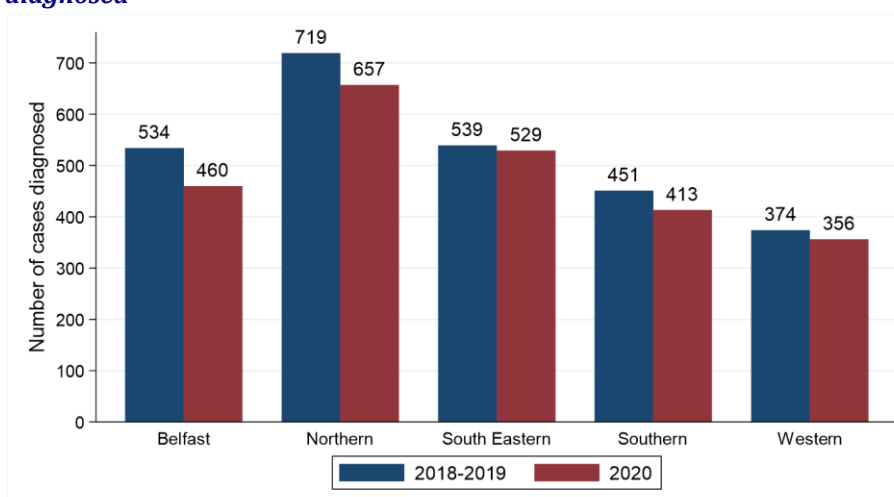
Health and Social Care Trust	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Belfast HSCT	534 (20.4%)	460 (19.0%)	-13.9% (74 patients)
Northern HSCT	719 (27.5%)	657 (27.2%)	-8.6% (62 patients)
South Eastern HSCT	539 (20.6%)	529 (21.9%)	-1.9% (10 patients)
Southern HSCT	451 (17.2%)	413 (17.1%)	-8.4% (38 patients)
Western HSCT	374 (14.3%)	356 (14.7%)	-4.8% (18 patients)
Northern Ireland	2,617	2,416	-7.7% (201 patients)

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

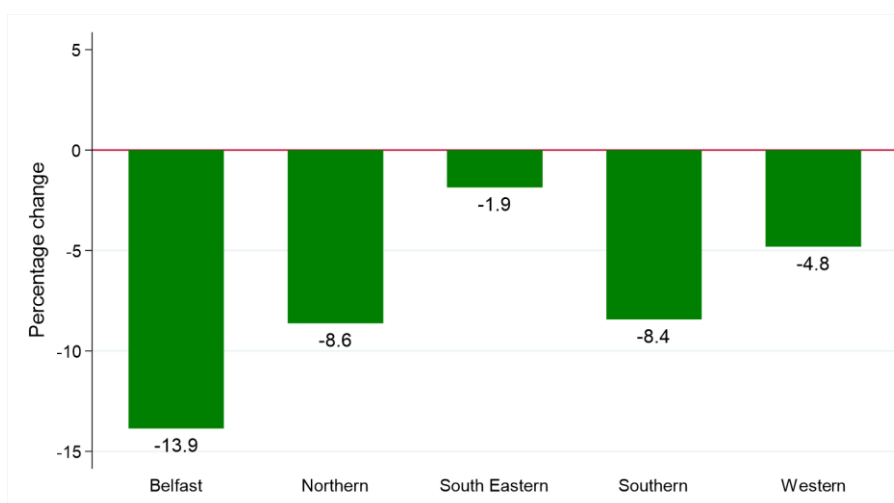
Note: Cases with unknown Health and Social Care Trust are included in totals

Figure 3: Cancer cases among older people 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 cancer cases among older people 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 cancer diagnosed among older people decreased by 5.6% from 431 per year in 2018 - 2019 to 407 in 2020. Between the same two time periods the number of cases among residents of the least deprived areas decreased by 18.2% from 603 per year to 493. The change in case distribution by deprivation quintile between 2018 - 2019 and 2020 was not statistically significant.

Table 4: Number and proportion of cancer cases among older people diagnosed in April-December of 2018-2020 by deprivation quintile and period of diagnosis

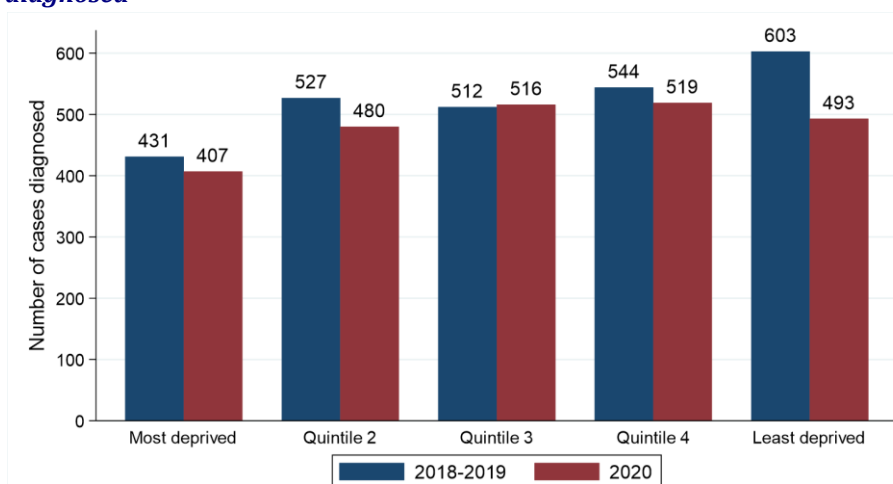
Deprivation quintile	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Most deprived	431 (16.5%)	407 (16.8%)	-5.6% (24 patients)
Quintile 2	527 (20.1%)	480 (19.9%)	-8.9% (47 patients)
Quintile 3	512 (19.6%)	516 (21.4%)	+0.8% (4 patients)
Quintile 4	544 (20.8%)	519 (21.5%)	-4.6% (25 patients)
Least deprived	603 (23.0%)	493 (20.4%)	-18.2% (110 patients)
Northern Ireland	2,617	2,416	-7.7% (201 patients)

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

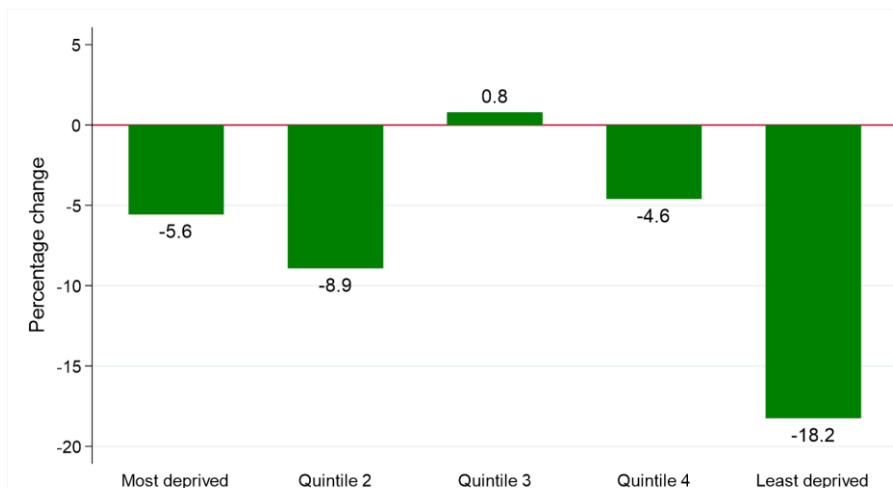
Note: Cases with unknown deprivation quintile are included in totals

Figure 4: Cancer cases among older people 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 cancer cases among older people by deprivation quintile



BASIS OF DIAGNOSIS

Excluding the first quarter of each year the number of cancer cases among older people diagnosed pathologically decreased by 12.2% from 1,793 per year in 2018 - 2019 to 1,574 in 2020, while the number of cases diagnosed clinically decreased by 3.3% from 765 per year to 740. The change in case distribution by basis of diagnosis between 2018 - 2019 and 2020 was statistically significant ($p < 0.001$).

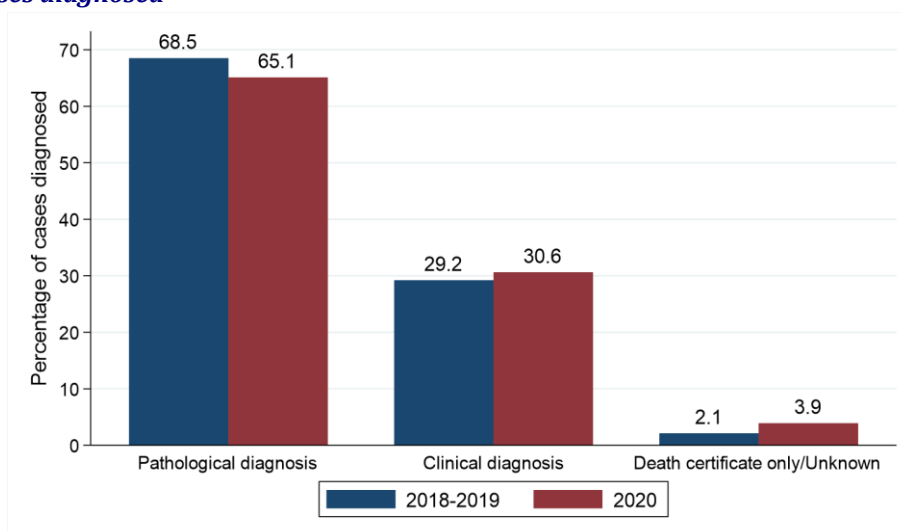
Table 5: Number and proportion of cancer cases among older people diagnosed in April-December of 2018-2020 by basis and period of diagnosis

Basis of diagnosis	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Pathological diagnosis	1,793 (68.5%)	1,574 (65.1%)	-12.2% (219 patients)
Clinical diagnosis	765 (29.2%)	740 (30.6%)	-3.3% (25 patients)
Specific tumour marker	5 (0.2%)	8 (0.3%)	+60.0% (3 patients)
Death certificate only/Unknown	54 (2.1%)	94 (3.9%)	+74.1% (40 patients)
All groups	2,617	2,416	-7.7% (201 patients)

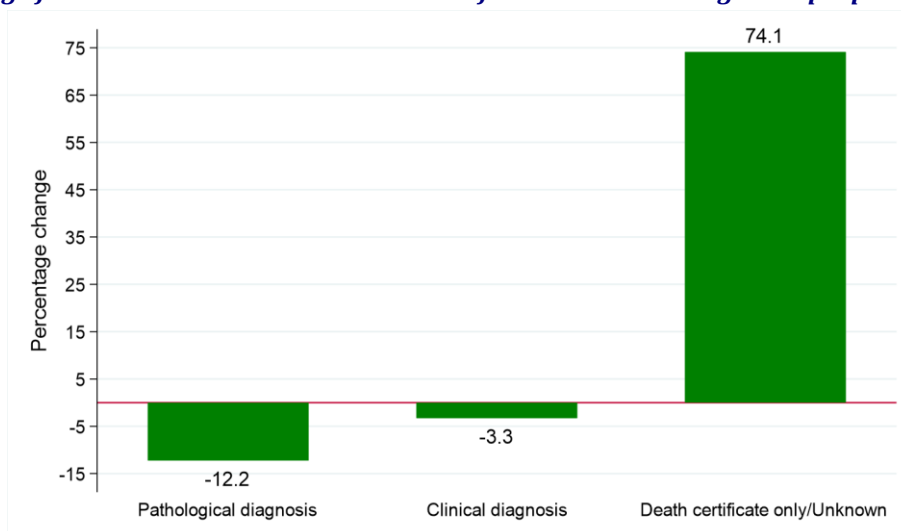
* Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.

Figure 5: Cancer cases among older people 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 cancer cases among older people by basis of diagnosis



STAGE

Excluding the first quarter of each year the number of older people diagnosed with cancer at Stage I decreased by 18.9% from 530 per year in 2018 - 2019 to 430 in 2020. Between the same two time periods the number of cases diagnosed at Stage IV increased by 2.8% from 597 per year to 614. The change in case distribution by stage at diagnosis between 2018 - 2019 and 2020 was statistically significant ($p = 0.012$).

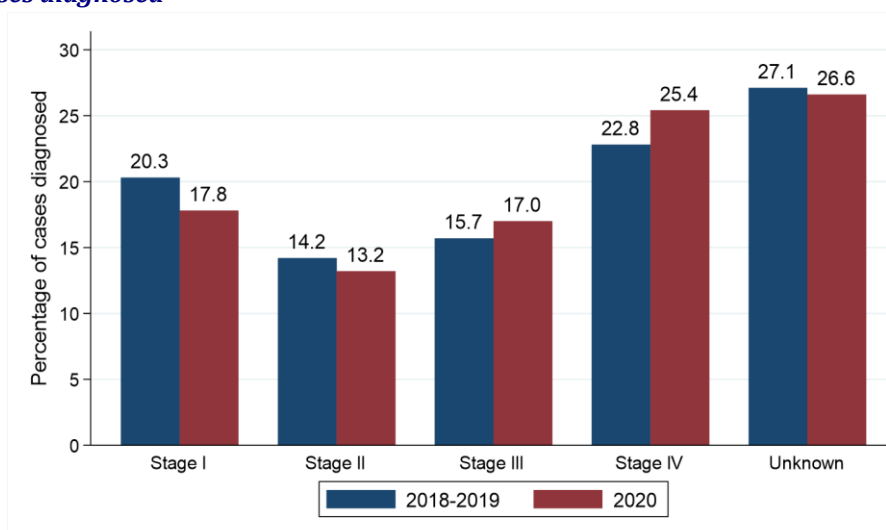
Table 6: Number and proportion of cancer cases among older people diagnosed in April-December of 2018-2020 by stage at diagnosis and period of diagnosis

Stage at diagnosis	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Stage I	530 (20.3%)	430 (17.8%)	-18.9% (100 patients)
Stage II	372 (14.2%)	320 (13.2%)	-14.0% (52 patients)
Stage III	411 (15.7%)	410 (17.0%)	-0.2% (1 patient)
Stage IV	597 (22.8%)	614 (25.4%)	+2.8% (17 patients)
Unknown	708 (27.1%)	642 (26.6%)	-9.3% (66 patients)
All stages	2,617	2,416	-7.7% (201 patients)

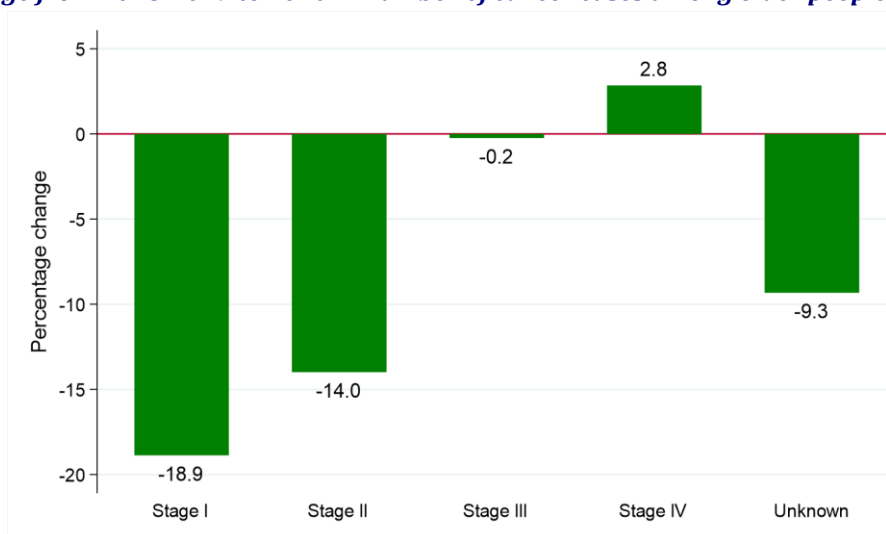
* Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.

Figure 6: Cancer cases among older people 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 cancer cases among older people by stage at diagnosis



METHOD OF HOSPITAL ADMISSION

Excluding the first quarter of each year the number of cases of cancer among older people where the patient had an emergency admission recorded as the most recent hospital admission type up to 30 days prior to diagnosis increased by 13.6% from 611 per year in 2018 - 2019 to 694 in 2020. The change in case distribution by hospital admission type between 2018 - 2019 and 2020 was statistically significant ($p < 0.001$).

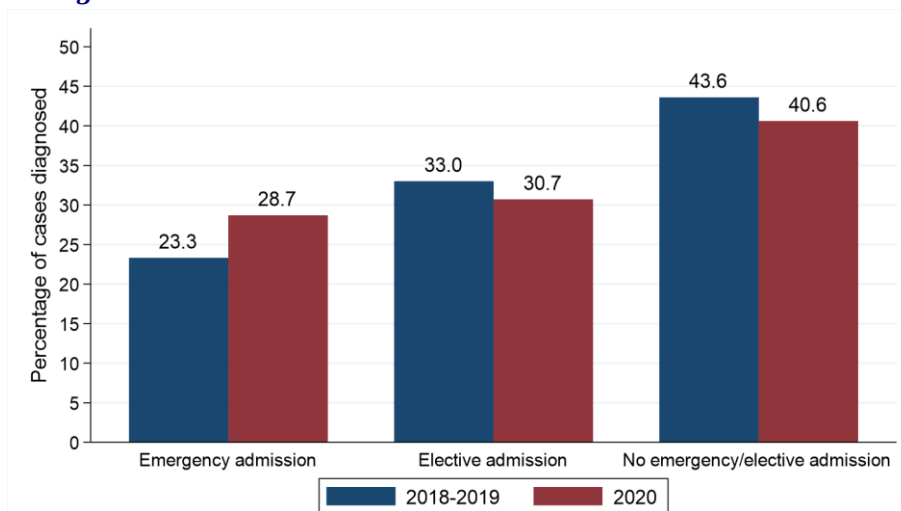
Table 7: Number and proportion of cancer cases among older people diagnosed in April-December of 2018-2020 by method of admission to hospital and period of diagnosis

Method of admission to hospital	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Emergency admission	611 (23.3%)	694 (28.7%)	+13.6% (83 patients)
Elective admission	864 (33.0%)	742 (30.7%)	-14.1% (122 patients)
No emergency/elective admission recorded	1,142 (43.6%)	980 (40.6%)	-14.2% (162 patients)
All persons	2,617	2,416	-7.7% (201 patients)

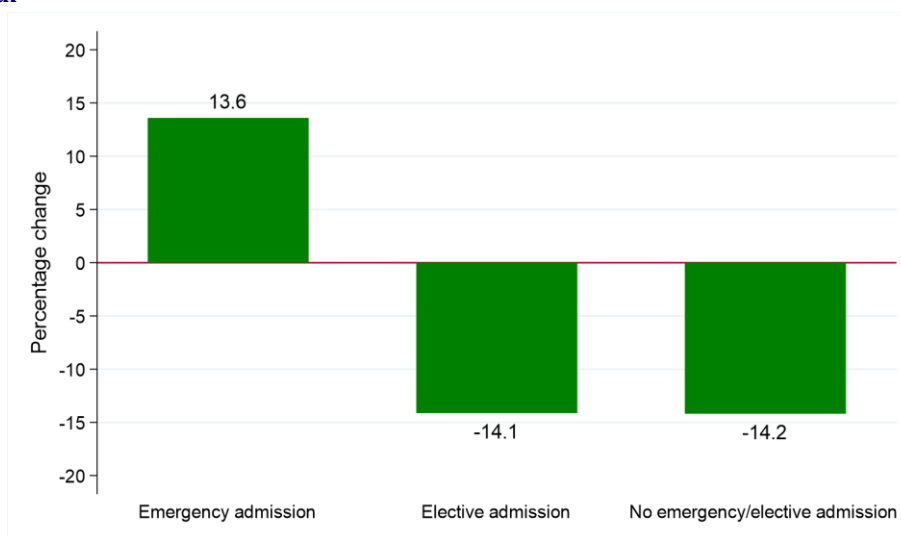
* Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.

Figure 7: Cancer cases among older people 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 cancer cases among older people 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

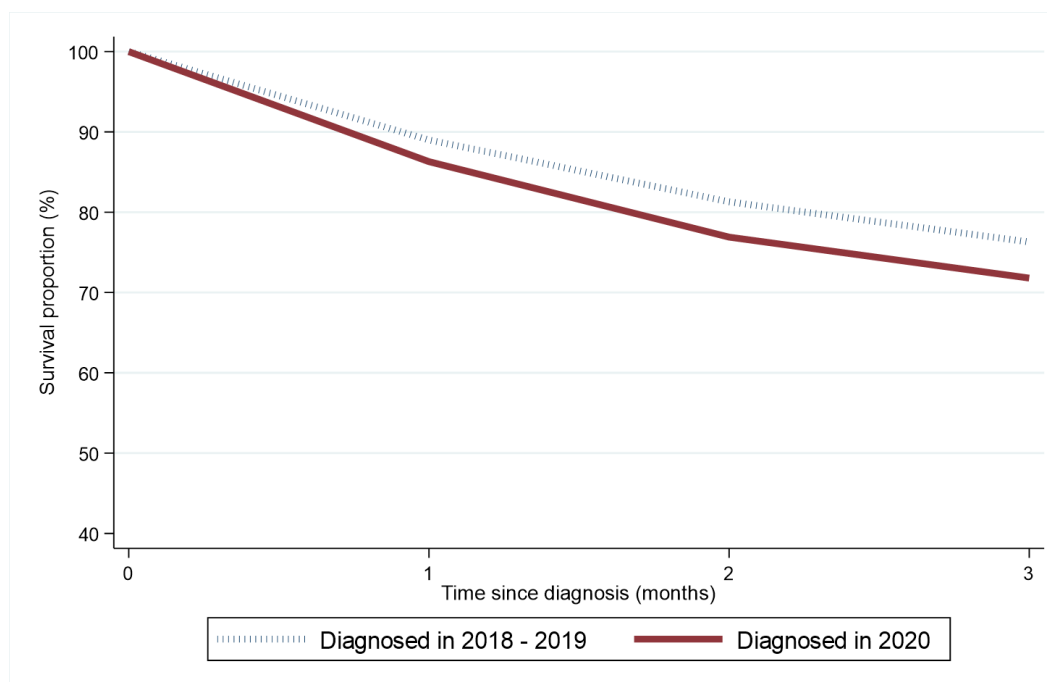
Survival among older people with cancer one month after diagnosis decreased from 89.0% among those diagnosed in April-December of 2018 - 2019 to 86.3% among those diagnosed in April-December of 2020. This change was statistically significant. Between the same two diagnosis periods, three-month survival decreased from 76.3% to 71.8%. This change was statistically significant.

Table 8: Observed survival for older people with cancer diagnosed in April-December of 2018-2020 by period of diagnosis

Survival time	Period of diagnosis (Apr-Dec)	
	2018-2019	2020
1 month	89.0% (88.1% - 90.0%)	86.3% (84.7% - 87.7%)*
2 months	81.3% (80.0% - 82.4%)	76.9% (75.0% - 78.7%)*
3 months	76.3% (75.0% - 77.5%)	71.8% (69.7% - 73.7%)*

* Statistically significant reduction

Figure 8: Observed survival for older people with cancer diagnosed in April-December of 2018-2020 by period of diagnosis



DEATHS FROM COVID-19

During 2020 there were a total of 212 deaths from Covid-19 among older people with cancer diagnosed at any point since 1993. Among the patients who died of Covid-19, 43 were diagnosed with cancer in 2020, while 28 were diagnosed in 2019.

NET SURVIVAL

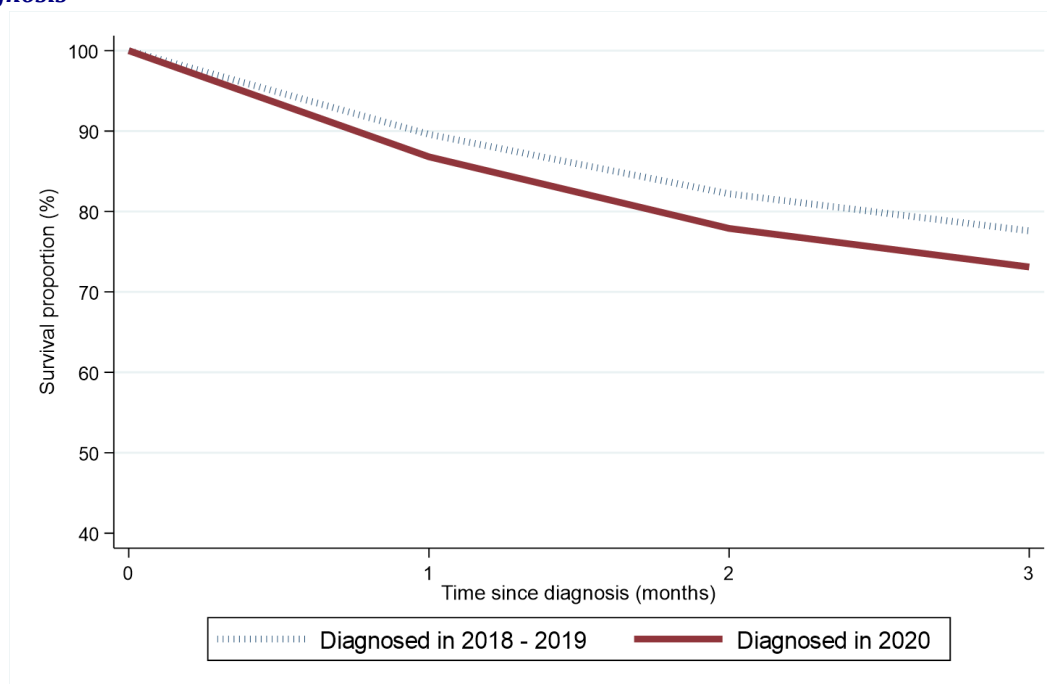
Age-standardised net survival (which takes account of deaths from other causes such as Covid-19) among older people with cancer one month after diagnosis decreased from 89.6% among those diagnosed in April-December of 2018 - 2019 to 86.8% among those diagnosed in April-December of 2020. This change was statistically significant. Between the same two time periods, three-month age-standardised net survival decreased from 77.6% to 73.1%. This change was statistically significant.

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

Survival time	Period of diagnosis (Apr-Dec)	
	2018-2019	2020
1 month	89.6% (88.7% - 90.5%)	86.8% (85.3% - 88.3%)*
2 months	82.2% (81.1% - 83.3%)	77.9% (76.1% - 79.8%)*
3 months	77.6% (76.2% - 79.0%)	73.1% (71.1% - 75.1%)*

* Statistically significant reduction

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



CANCER MORTALITY

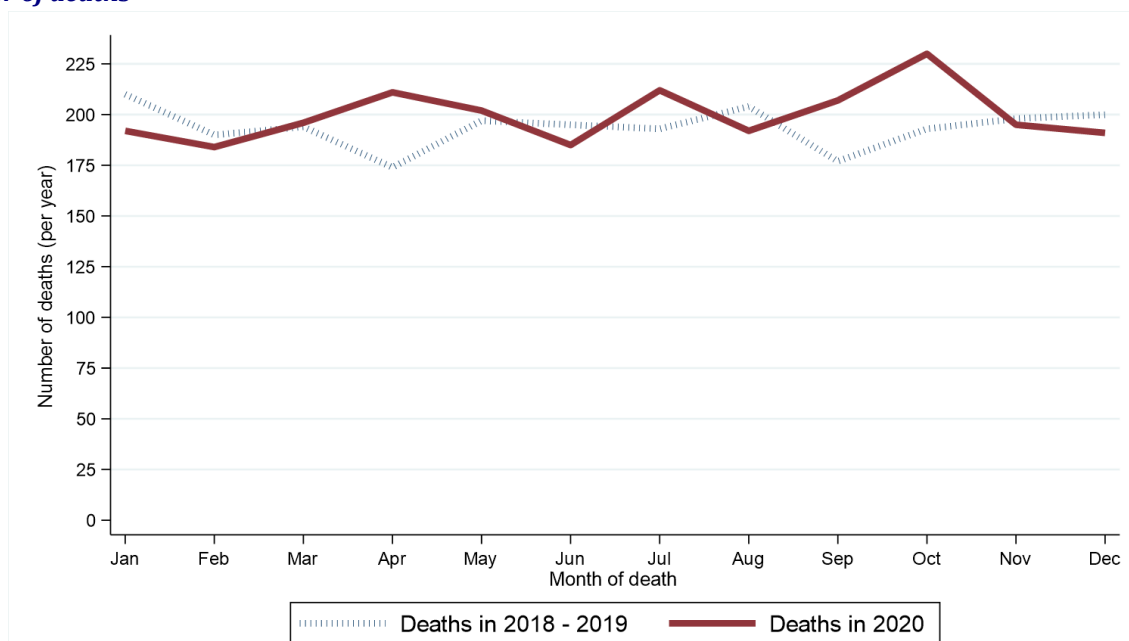
During the April-December period when Covid-19 was present the number of deaths from cancer among older people increased by 5.5% from 1,730 per year in 2018 - 2019 to 1,825 in 2020.

Table 10: Number of cancer deaths among older people 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*	2,323	210	190	194	174	197	195	193	204	177	193	198	200
2020	2,397	192	184	196	211	202	185	212	192	207	230	195	191

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

Figure 10: Number of cancer deaths among older people in 2018-2020 by month and year of death
(a) Number of deaths



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

