
Impact of Covid-19 on incidence, survival and mortality of oesophageal 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

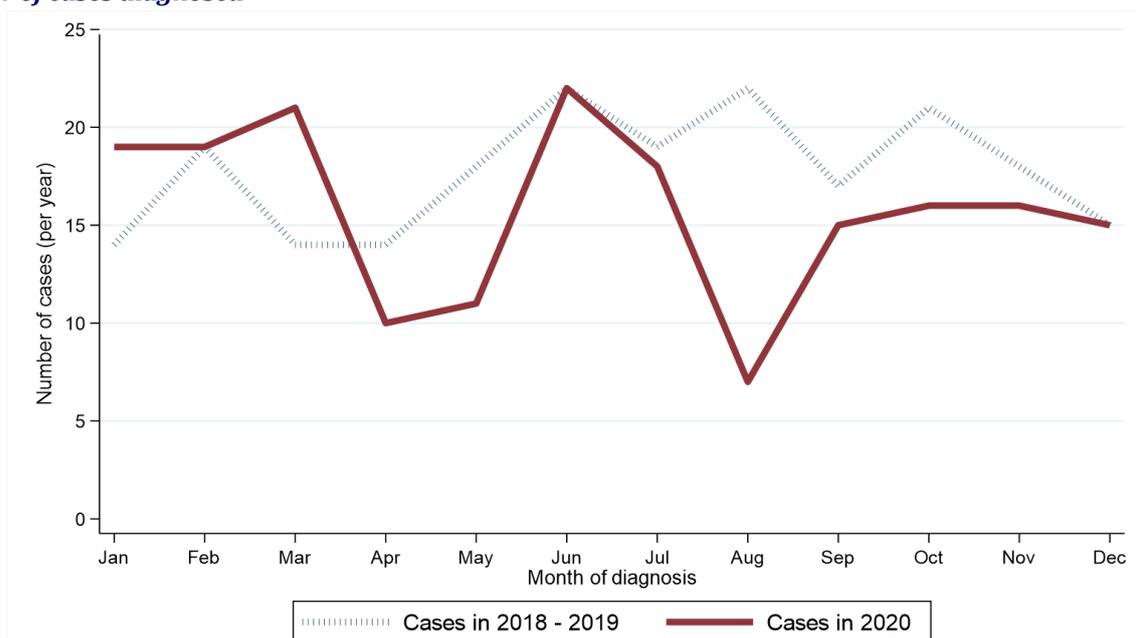
During the April-December period when Covid-19 was present the number of cases of oesophageal cancer diagnosed decreased by 21.2% (35 patients) from 165 per year in 2018 - 2019 to 130 in 2020.

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

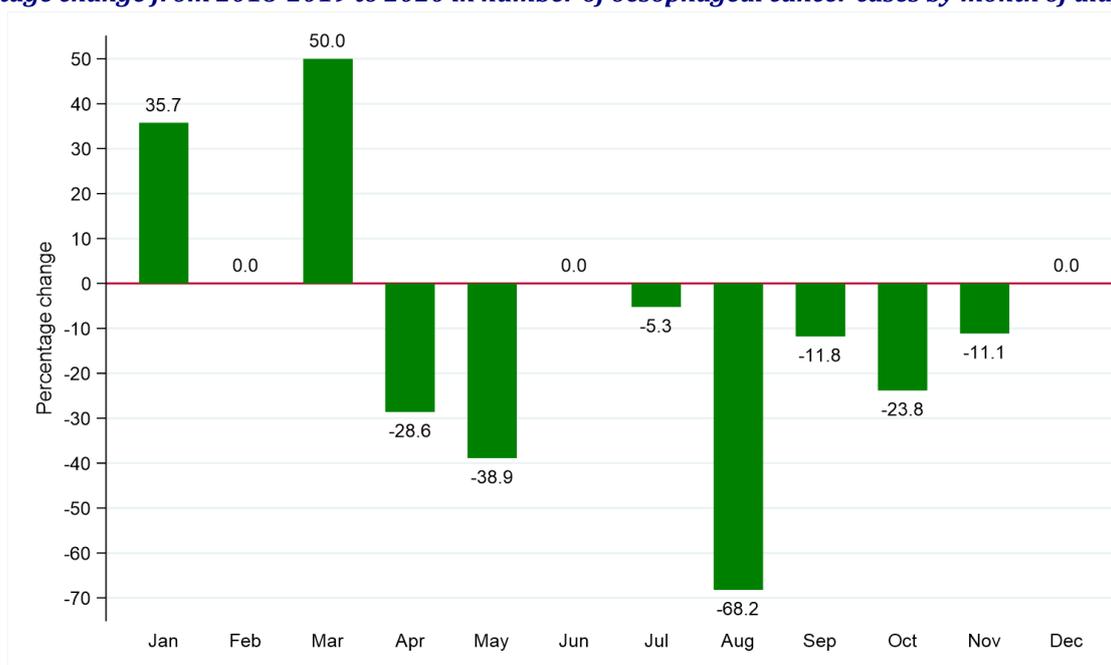
Period of diagnosis	Annual total	Month diagnosed											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
2018-2019*	212	14	19	14	14	18	22	19	22	17	21	18	15
2020	189	19	19	21	10	11	22	18	7	15	16	16	15

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

Figure 1: Number of oesophageal 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 oesophageal cancer cases by month of diagnosis



GENDER

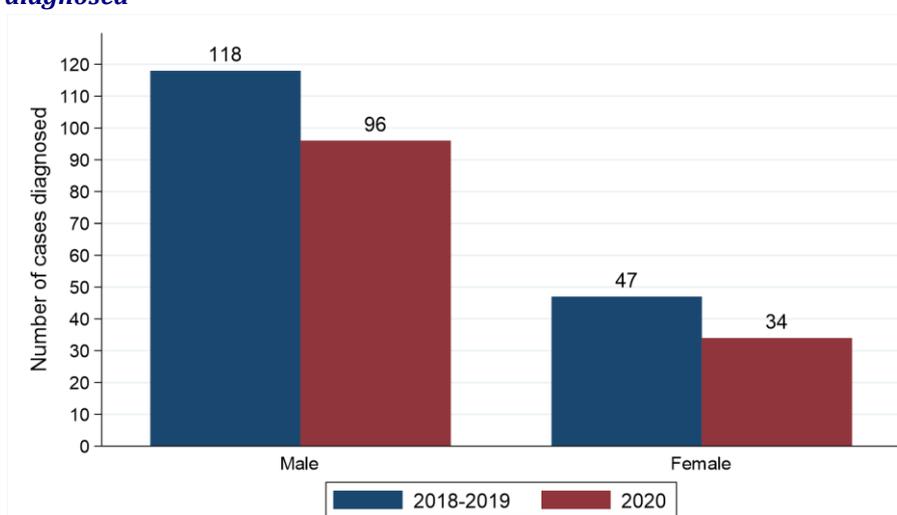
Excluding the first quarter of each year among males the number of cases of oesophageal cancer diagnosed decreased by 18.6% from 118 per year in 2018 - 2019 to 96 in 2020. Between the same two time periods the number of cases among females decreased by 27.7% from 47 per year to 34. The change in case distribution by gender between 2018 - 2019 and 2020 was not statistically significant.

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

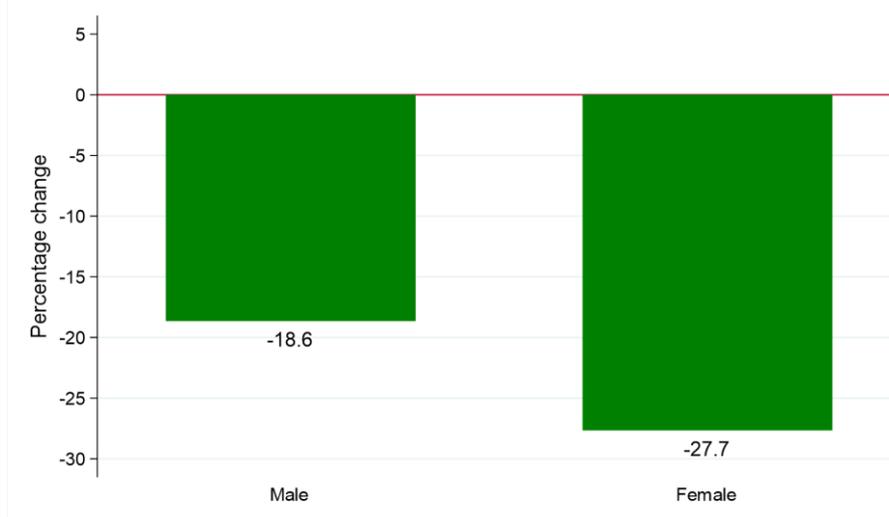
Gender	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Male	118 (71.5%)	96 (73.8%)	-18.6% (22 patients)
Female	47 (28.5%)	34 (26.2%)	-27.7% (13 patients)
All persons	165	130	-21.2% (35 patients)

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

Figure 2: Oesophageal 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 oesophageal cancer cases by gender



AGE

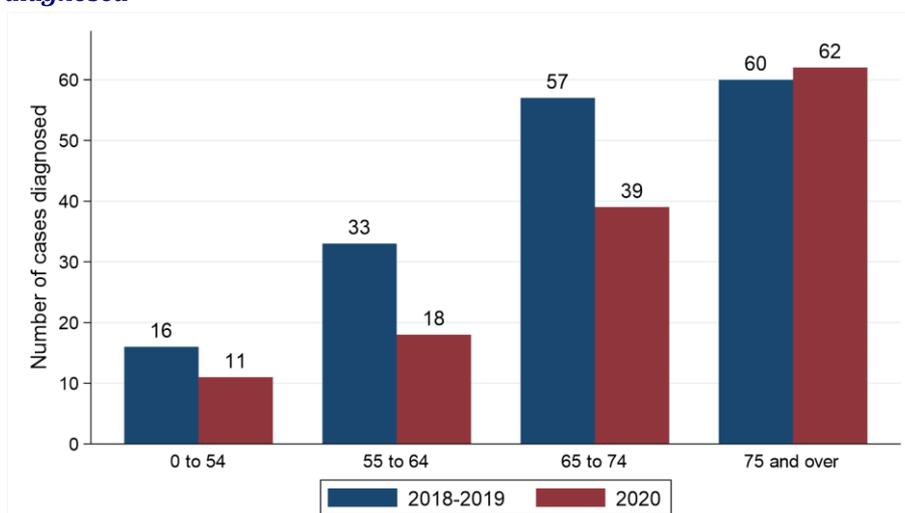
Excluding the first quarter of each year among people aged 55 to 64 the number of cases of oesophageal cancer diagnosed decreased by 45.5% from 33 per year in 2018 - 2019 to 18 in 2020. Between the same two time periods, the number of cases among people aged 75 and over increased by 3.3% from 60 per year to 62. The change in case distribution by age between 2018 - 2019 and 2020 was not statistically significant.

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

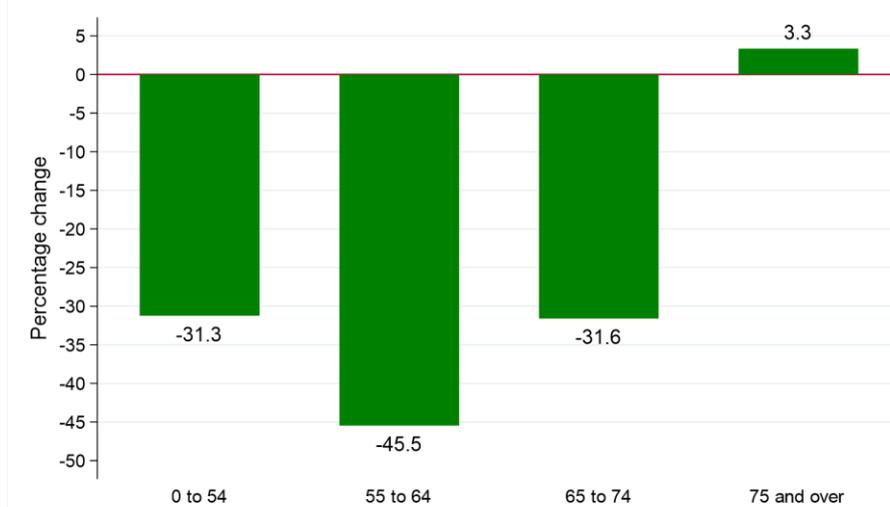
Age group	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
0 to 54	16 (9.7%)	11 (8.5%)	-31.3% (5 patients)
55 to 64	33 (20.0%)	18 (13.8%)	-45.5% (15 patients)
65 to 74	57 (34.5%)	39 (30.0%)	-31.6% (18 patients)
75 and over	60 (36.4%)	62 (47.7%)	+3.3% (2 patients)
All ages	165	130	-21.2% (35 patients)

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

Figure 3: Oesophageal 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 oesophageal 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 oesophageal cancer diagnosed decreased by 56.5% from 23 per year in 2018 - 2019 to 10 in 2020. Between the same two time periods the number of cases among residents of South Eastern HSCT increased by 15.2% from 33 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 oesophageal cancer cases diagnosed in April-December of 2018-2020 by Health and Social Care Trust and period of diagnosis

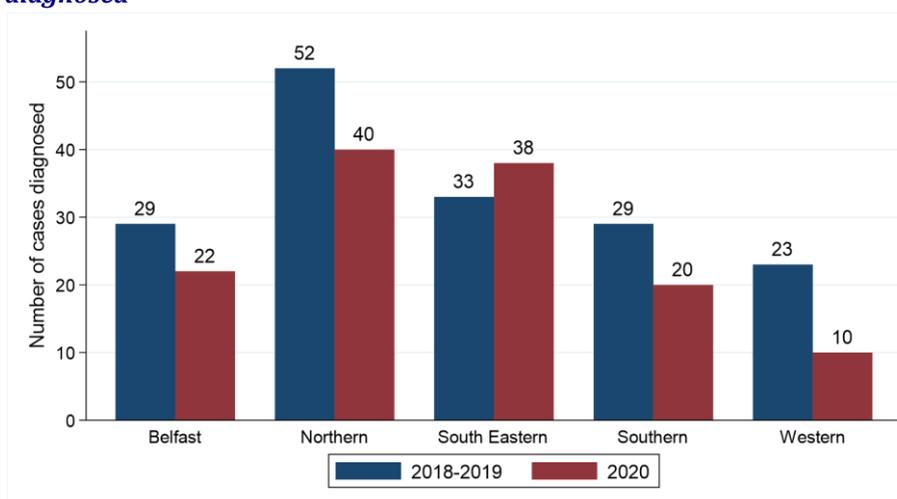
Health and Social Care Trust	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Belfast HSCT	29 (17.6%)	22 (16.9%)	-24.1% (7 patients)
Northern HSCT	52 (31.5%)	40 (30.8%)	-23.1% (12 patients)
South Eastern HSCT	33 (20.0%)	38 (29.2%)	+15.2% (5 patients)
Southern HSCT	29 (17.6%)	20 (15.4%)	-31.0% (9 patients)
Western HSCT	23 (13.9%)	10 (7.7%)	-56.5% (13 patients)
Northern Ireland	165	130	-21.2% (35 patients)

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

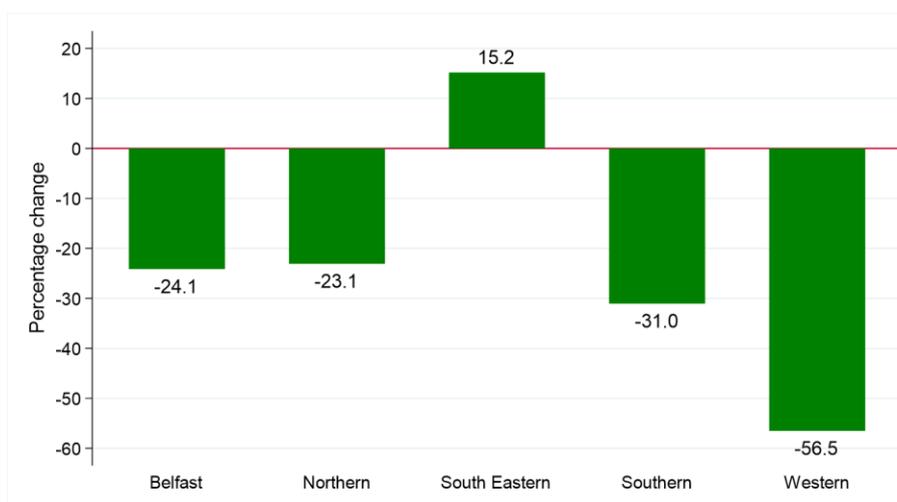
Note: Cases with unknown Health and Social Care Trust are included in totals

Figure 4: Oesophageal 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 oesophageal 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 oesophageal cancer diagnosed decreased by 29.6% from 27 per year in 2018 - 2019 to 19 in 2020. Between the same two time periods the number of cases among residents of the least deprived areas decreased by 25.0% from 36 per year to 27. The change in case distribution by deprivation quintile between 2018 - 2019 and 2020 was not statistically significant.

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

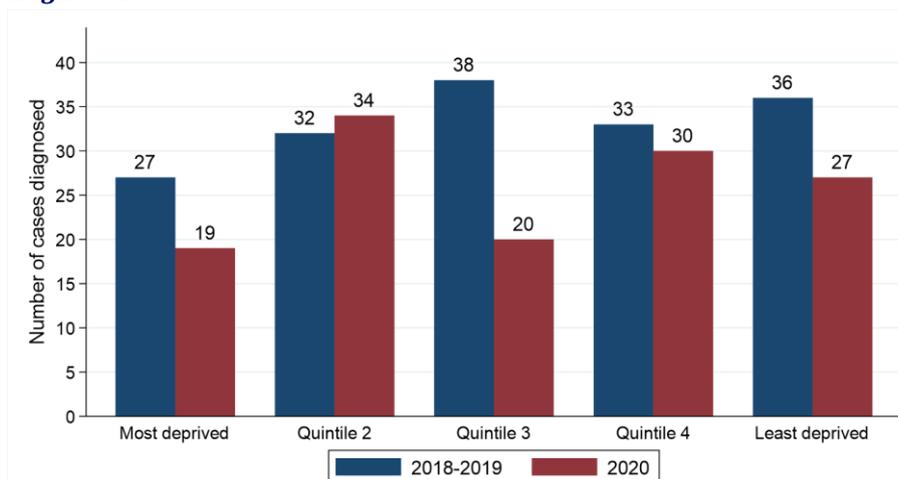
Deprivation quintile	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Most deprived	27 (16.4%)	19 (14.6%)	-29.6% (8 patients)
Quintile 2	32 (19.4%)	34 (26.2%)	+6.3% (2 patients)
Quintile 3	38 (23.0%)	20 (15.4%)	-47.4% (18 patients)
Quintile 4	33 (20.0%)	30 (23.1%)	-9.1% (3 patients)
Least deprived	36 (21.8%)	27 (20.8%)	-25.0% (9 patients)
Northern Ireland	165	130	-21.2% (35 patients)

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

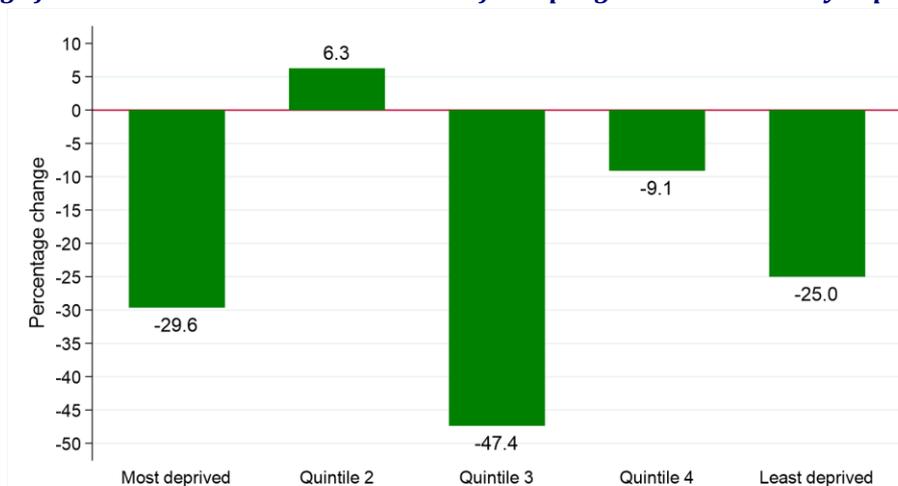
Note: Cases with unknown deprivation quintile are included in totals

Figure 5: Oesophageal 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 oesophageal cancer cases by deprivation quintile



STAGE

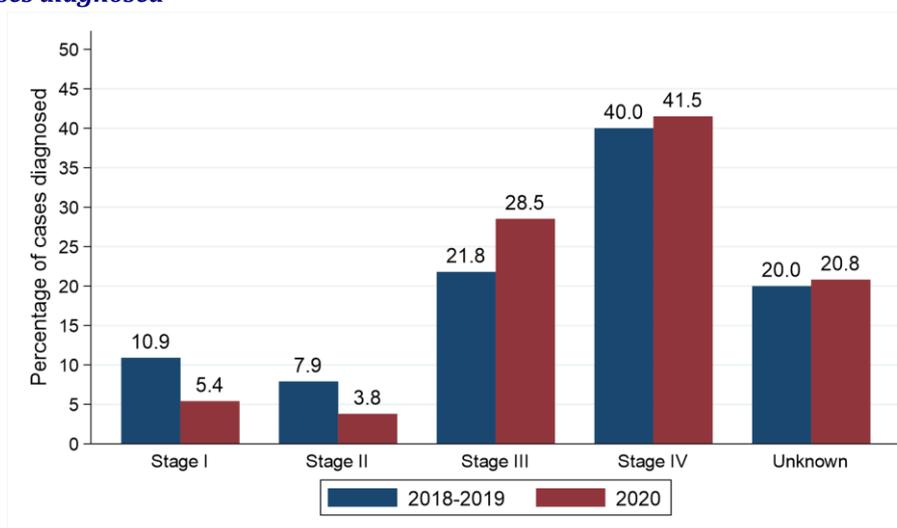
Excluding the first quarter of each year the number of oesophageal cancer cases diagnosed at Stage I decreased by 61.1% from 18 per year in 2018 - 2019 to 7 in 2020. Between the same two time periods the number of cases diagnosed at Stage IV decreased by 18.2% from 66 per year to 54. The change in case distribution by stage at diagnosis between 2018 - 2019 and 2020 was not statistically significant.

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

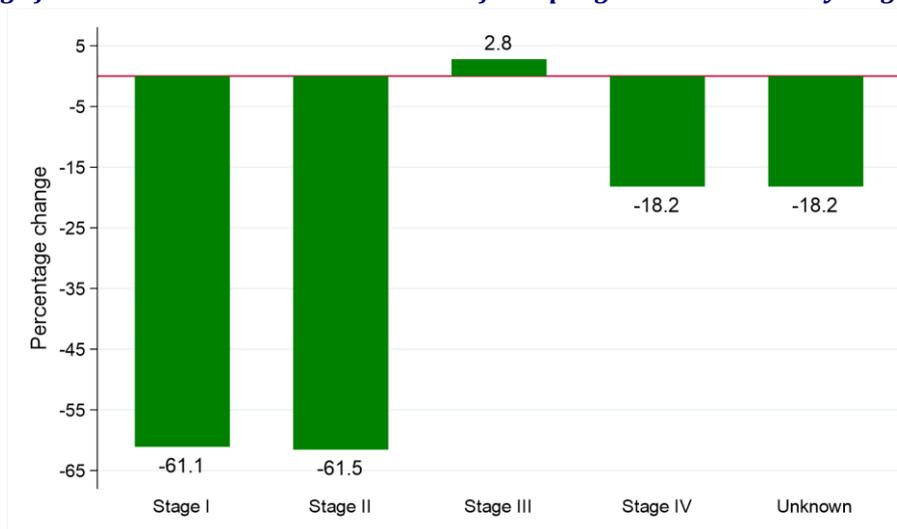
Stage at diagnosis	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Stage I	18 (10.9%)	7 (5.4%)	-61.1% (11 patients)
Stage II	13 (7.9%)	5 (3.8%)	-61.5% (8 patients)
Stage III	36 (21.8%)	37 (28.5%)	+2.8% (1 patient)
Stage IV	66 (40.0%)	54 (41.5%)	-18.2% (12 patients)
Unknown	33 (20.0%)	27 (20.8%)	-18.2% (6 patients)
All stages	165	130	-21.2% (35 patients)

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

Figure 6: Oesophageal 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 oesophageal cancer cases by stage at diagnosis



METHOD OF HOSPITAL ADMISSION

Excluding the first quarter of each year the number of cases of oesophageal 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 96.2% from 26 per year in 2018 - 2019 to 51 in 2020. The change in case distribution by hospital admission type between 2018 - 2019 and 2020 was statistically significant ($p < 0.001$).

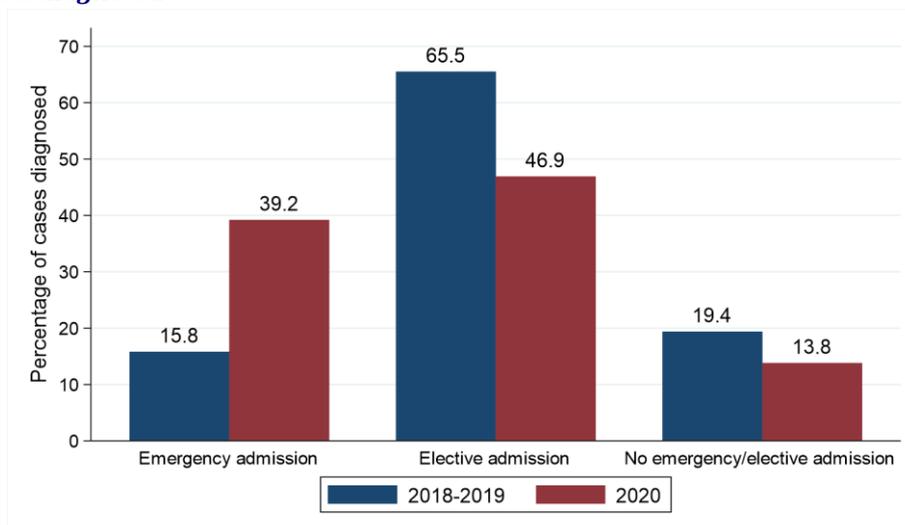
Table 7: Number and proportion of oesophageal cancer cases diagnosed in April-December of 2018-2020 by method of admission to hospital and period of diagnosis

Method of admission to hospital	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Emergency admission	26 (15.8%)	51 (39.2%)	+96.2% (25 patients)
Elective admission	108 (65.5%)	61 (46.9%)	-43.5% (47 patients)
No emergency/elective admission recorded	32 (19.4%)	18 (13.8%)	-43.8% (14 patients)
All persons	165	130	-21.2% (35 patients)

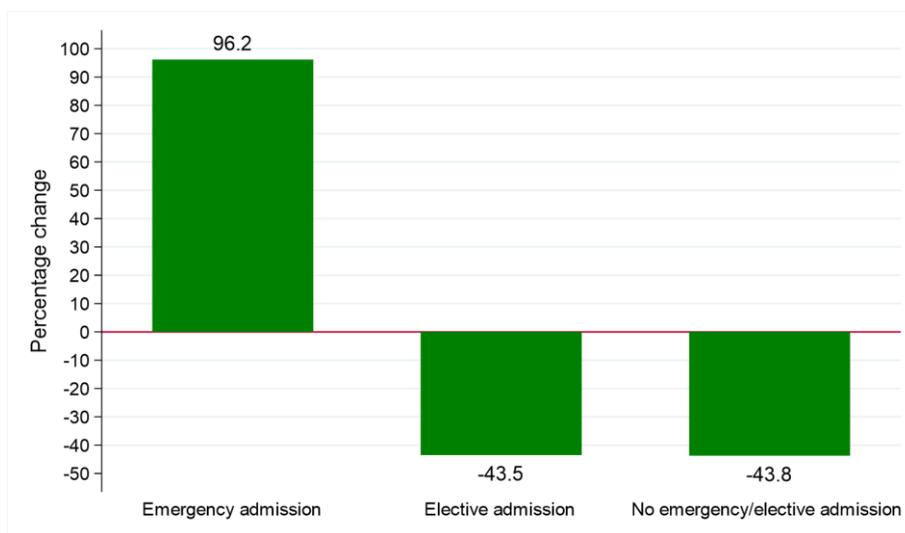
* Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.

Figure 7: Oesophageal 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 oesophageal cancer cases by method of admission to hospital



TREATMENT

Excluding the first quarter of each year the number of oesophageal cancer cases where the patient was treated with surgery (within six months of diagnosis) decreased by 13.4% from 82 per year for those diagnosed in 2018 - 2019 to 71 for those diagnosed in 2020. The resulting change in the proportion receiving surgery from 49.7% in 2018 - 2019 to 54.6% 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 27.3% from 88 per year to 64. The resulting change in the proportion receiving chemotherapy from 53.3% in 2018 - 2019 to 49.2% in 2020 was not statistically significant.

The number of oesophageal cancer cases where the patient was treated with radiotherapy (within six months of diagnosis) decreased by 21.6% from 37 per year for those diagnosed in April-December of 2018 - 2019 to 29 for those diagnosed in April-December of 2020. The resulting change in the proportion receiving radiotherapy from 22.4% in 2018 - 2019 to 22.3% 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 16.9%. This compared to 15.8% of those diagnosed in 2018 - 2019. This change was not statistically significant.

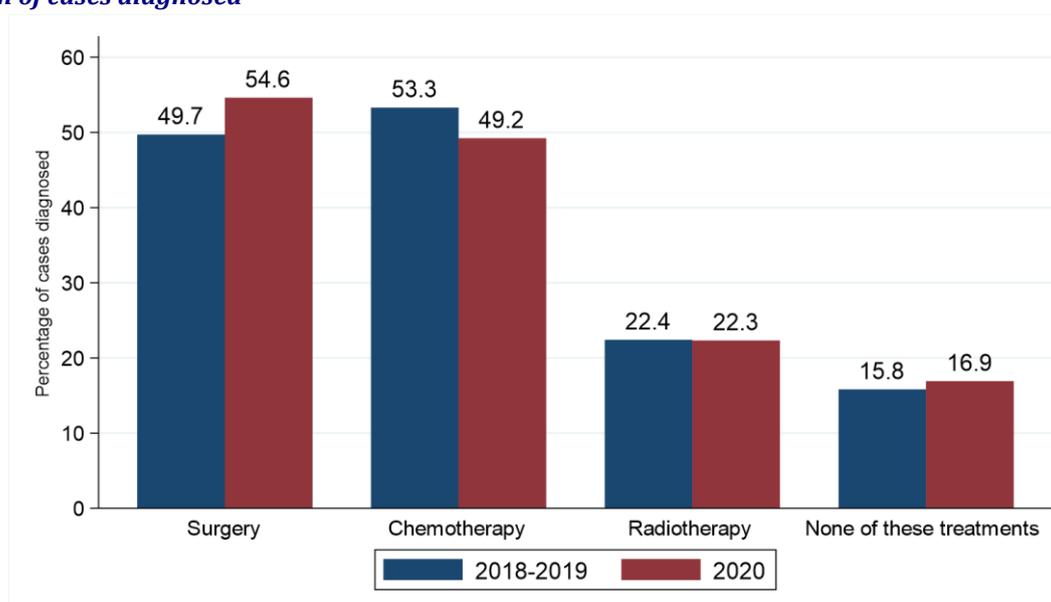
Table 8: Number and proportion of oesophageal cancer cases diagnosed in April-December of 2018-2020 by treatment type and period of diagnosis

Treatment type	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019 average	2020	
Surgery	82 (49.7%)	71 (54.6%)	-13.4% (11 patients)
Chemotherapy	88 (53.3%)	64 (49.2%)	-27.3% (24 patients)
Radiotherapy	37 (22.4%)	29 (22.3%)	-21.6% (8 patients)
None of these treatments	26 (15.8%)	22 (16.9%)	-15.4% (4 patients)

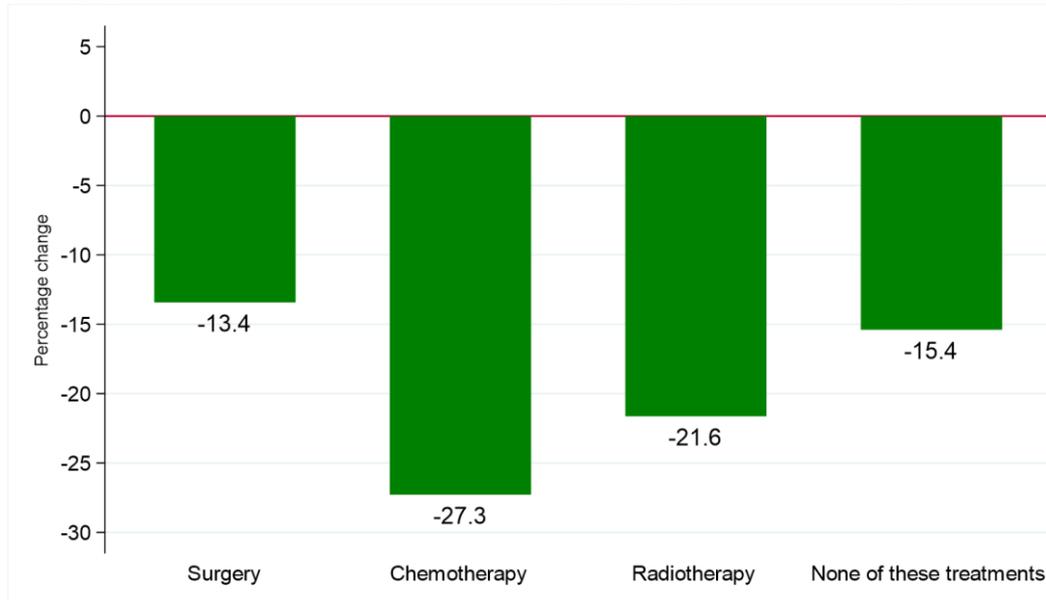
No statistically significant changes

Figure 8: Oesophageal 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 oesophageal 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

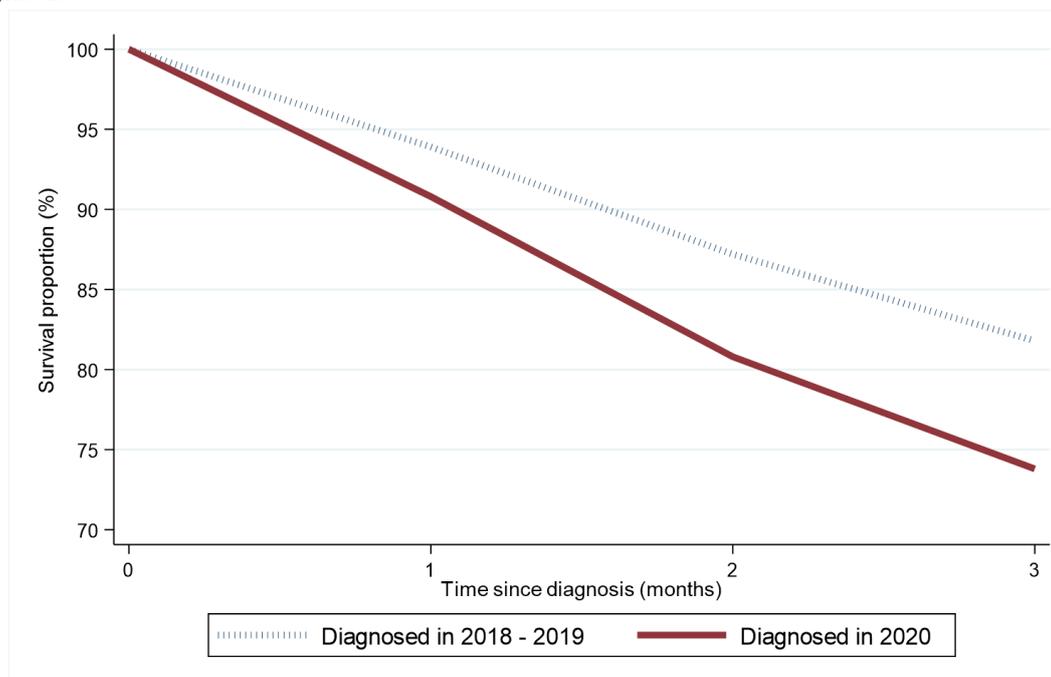
Survival among oesophageal cancer patients one month after diagnosis decreased from 93.9% among those diagnosed in April-December of 2018 - 2019 to 90.8% among those diagnosed in April-December of 2020. This change was not statistically significant. Between the same two diagnosis periods, three-month survival decreased from 81.8% to 73.8%. This change was not statistically significant.

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

Survival time	Period of diagnosis (Apr-Dec)	
	2018-2019	2020
1 month	93.9% (90.7% - 96.0%)	90.8% (84.3% - 94.6%)
2 months	87.2% (83.1% - 90.4%)	80.8% (72.9% - 86.6%)
3 months	81.8% (77.1% - 85.5%)	73.8% (65.4% - 80.5%)

No statistically significant reductions

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



DEATHS FROM COVID-19

During 2020 there were a total of 6 deaths from Covid-19 among oesophageal cancer patients diagnosed at any point since 1993.

NET SURVIVAL

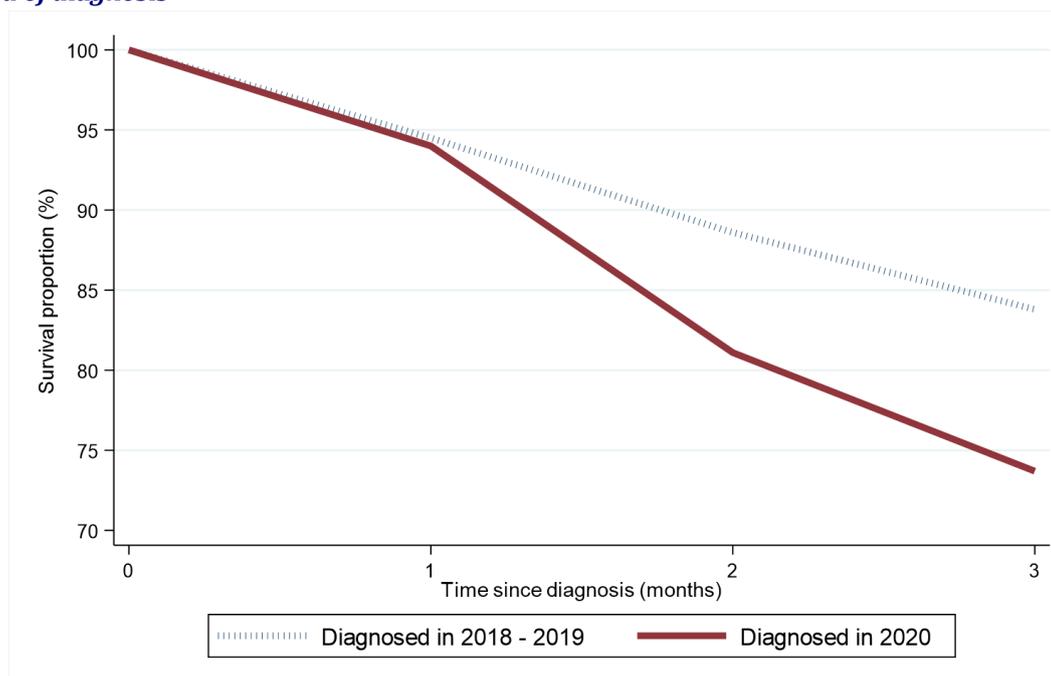
Age-standardised net survival (which takes account of deaths from other causes such as Covid-19) among oesophageal cancer patients one month after diagnosis decreased from 94.5% among those diagnosed in April-December of 2018 - 2019 to 94.0% among those diagnosed in April-December of 2020. This change was not statistically significant. Between the same two time periods, three-month age-standardised net survival decreased from 83.8% to 73.7%. This change was not statistically significant.

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

Survival time	Period of diagnosis (Apr-Dec)	
	2018-2019	2020
1 month	94.5% (91.9% - 97.1%)	94.0% (90.6% - 97.6%)
2 months	88.6% (85.2% - 92.1%)	81.1% (73.5% - 89.5%)
3 months	83.8% (79.9% - 87.8%)	73.7% (65.7% - 82.7%)

No statistically significant reductions

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



CANCER MORTALITY

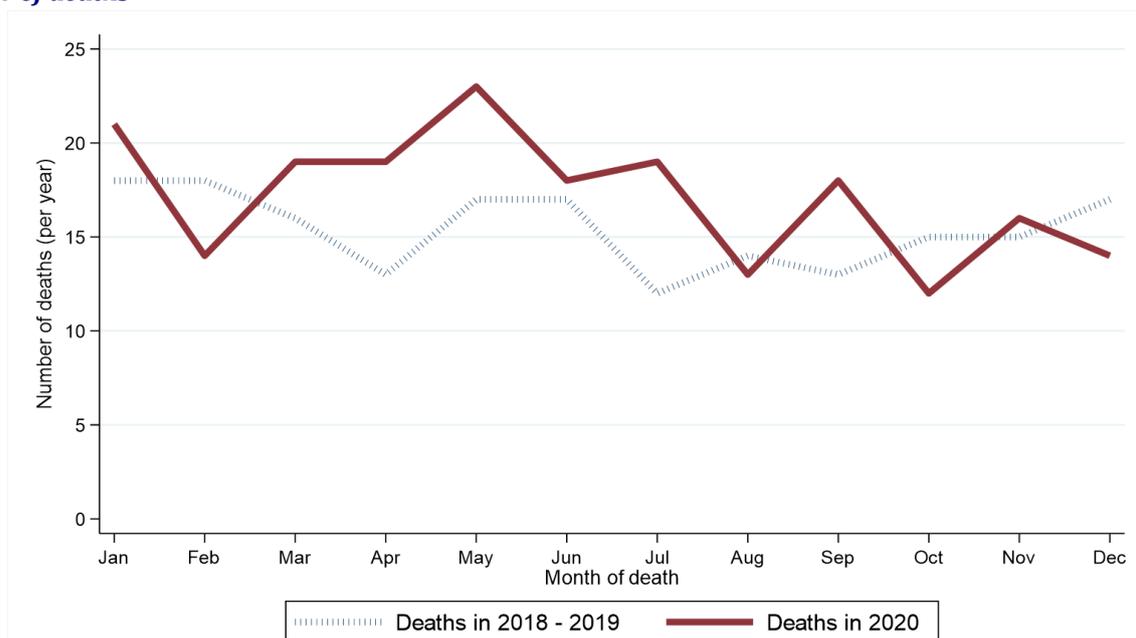
During the April-December period when Covid-19 was present the number of deaths from oesophageal cancer increased by 16.0% from 131 per year in 2018 - 2019 to 152 in 2020.

Table 11: Number of oesophageal 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*	182	18	18	16	13	17	17	12	14	13	15	15	17
2020	206	21	14	19	19	23	18	19	13	18	12	16	14

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

Figure 11: Number of oesophageal 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 oesophageal cancer deaths by month of death

