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

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

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## Further information

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

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## Acknowledgements

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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 uterine cancer diagnosed among females decreased by 17.4% (37 patients) from 213 per year in 2018 - 2019 to 176 in 2020.

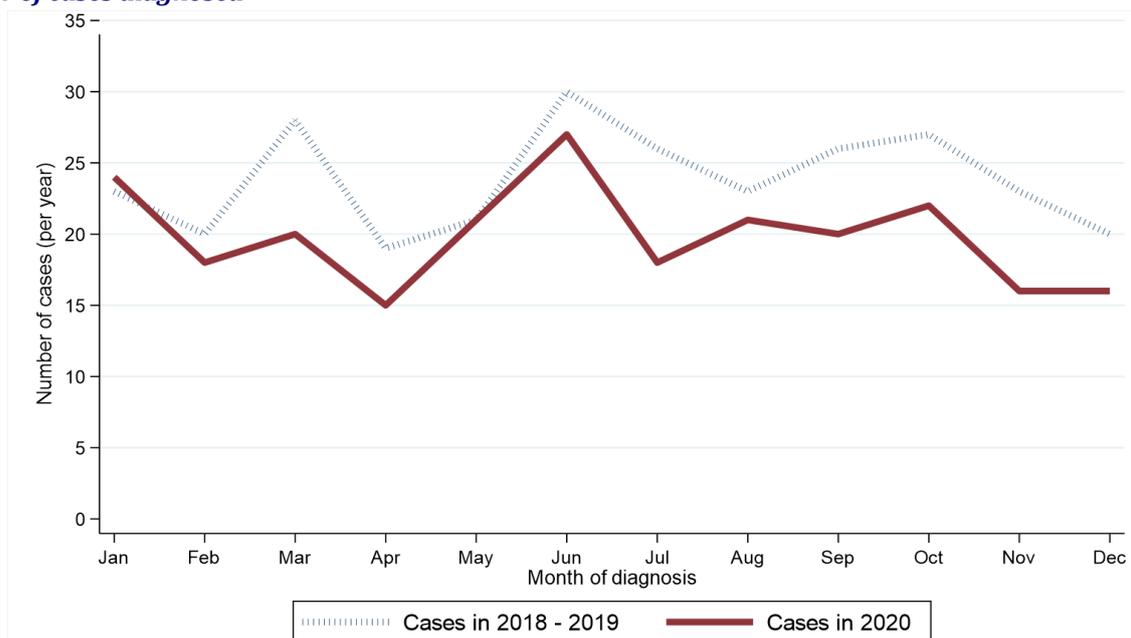
**Table 1: Number of uterine cancer cases diagnosed in 2018-2020 by month and year of diagnosis**

Period of diagnosis	Annual total	Month diagnosed											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
2018-2019*	283	23	20	28	19	21	30	26	23	26	27	23	20
2020	238	24	18	20	15	21	27	18	21	20	22	16	16

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

**Figure 1: Number of uterine 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 uterine cancer cases by month of diagnosis**



## AGE

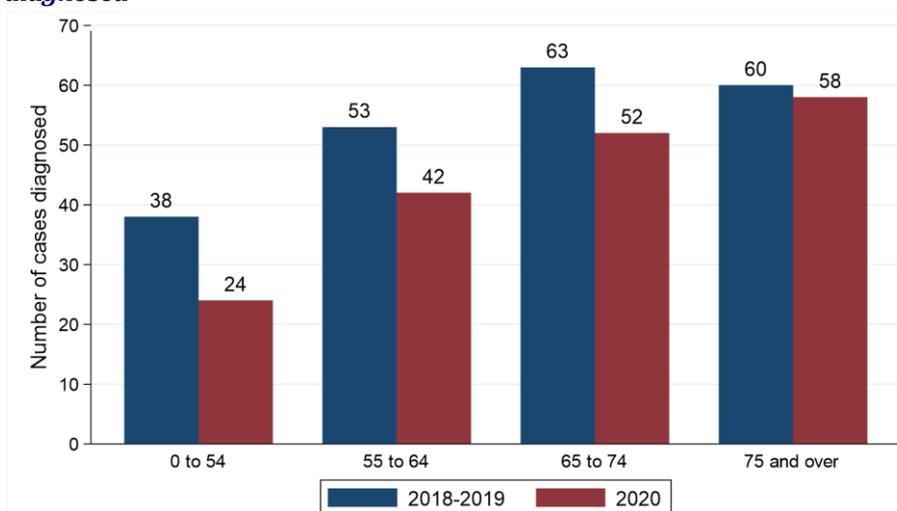
Excluding the first quarter of each year among people aged 0 to 54 the number of cases of uterine cancer diagnosed decreased by 36.8% from 38 per year in 2018 - 2019 to 24 in 2020. Between the same two time periods, the number of cases among people aged 75 and over decreased by 3.3% from 60 per year to 58. The change in case distribution by age between 2018 - 2019 and 2020 was not statistically significant.

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

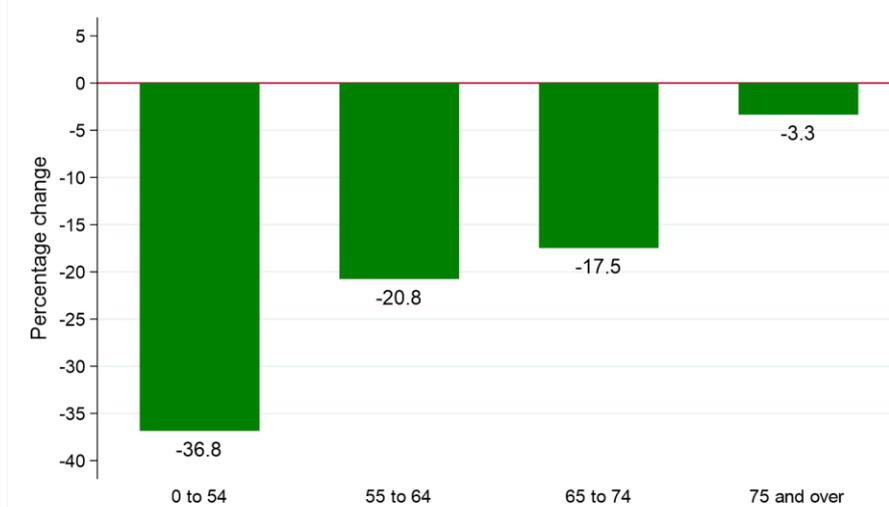
Age group	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
0 to 54	38 (17.8%)	24 (13.6%)	-36.8% (14 patients)
55 to 64	53 (24.9%)	42 (23.9%)	-20.8% (11 patients)
65 to 74	63 (29.6%)	52 (29.5%)	-17.5% (11 patients)
75 and over	60 (28.2%)	58 (33.0%)	-3.3% (2 patients)
All ages	213	176	-17.4% (37 patients)

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

**Figure 2: Uterine 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 uterine cancer cases by age at diagnosis



## HEALTH AND SOCIAL CARE TRUST

Excluding the first quarter of each year among residents of Southern HSCT the number of cases of uterine cancer diagnosed decreased by 39.1% from 46 per year in 2018 - 2019 to 28 in 2020. Between the same two time periods the number of cases among residents of Western HSCT increased by 10.5% from 38 per year to 42. The change in case distribution by HSCT between 2018 - 2019 and 2020 was not statistically significant.

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

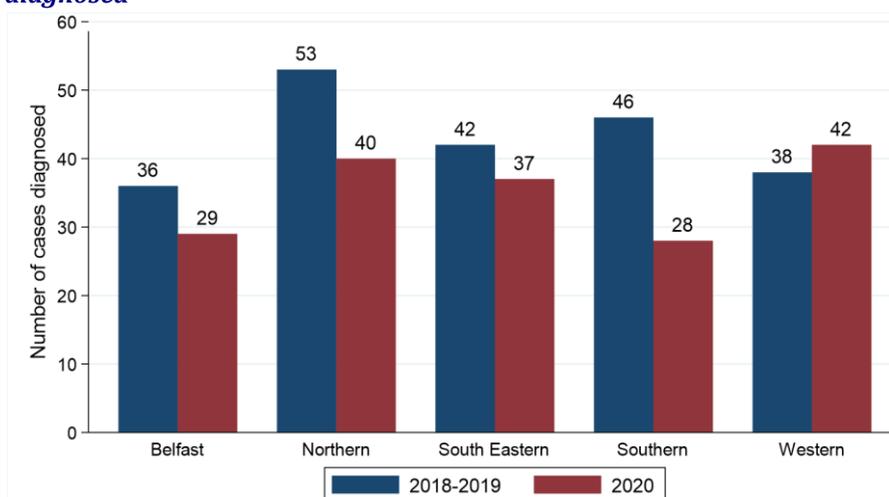
Health and Social Care Trust	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Belfast HSCT	36 (16.9%)	29 (16.5%)	-19.4% (7 patients)
Northern HSCT	53 (24.9%)	40 (22.7%)	-24.5% (13 patients)
South Eastern HSCT	42 (19.7%)	37 (21.0%)	-11.9% (5 patients)
Southern HSCT	46 (21.6%)	28 (15.9%)	-39.1% (18 patients)
Western HSCT	38 (17.8%)	42 (23.9%)	+10.5% (4 patients)
Northern Ireland	213	176	-17.4% (37 patients)

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

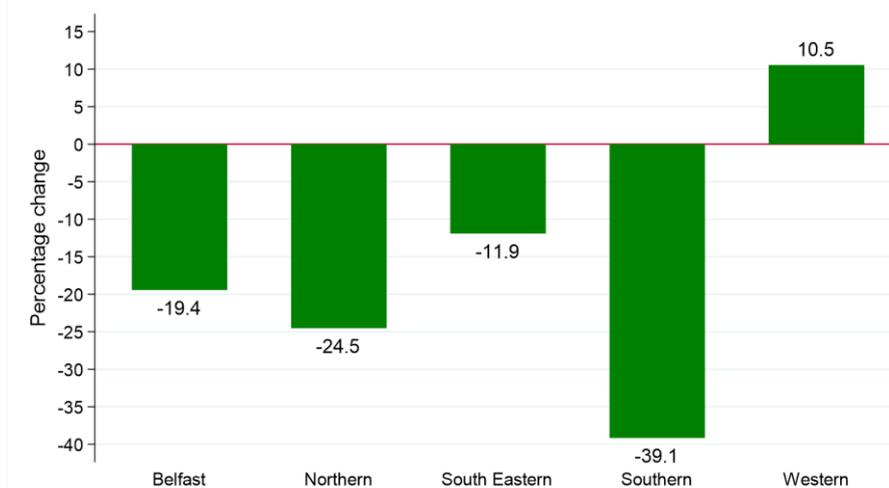
Note: Cases with unknown Health and Social Care Trust are included in totals

**Figure 3: Uterine 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 uterine 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 uterine cancer diagnosed decreased by 21.2% from 33 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 27.5% from 51 per year to 37. The change in case distribution by deprivation quintile between 2018 - 2019 and 2020 was not statistically significant.

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

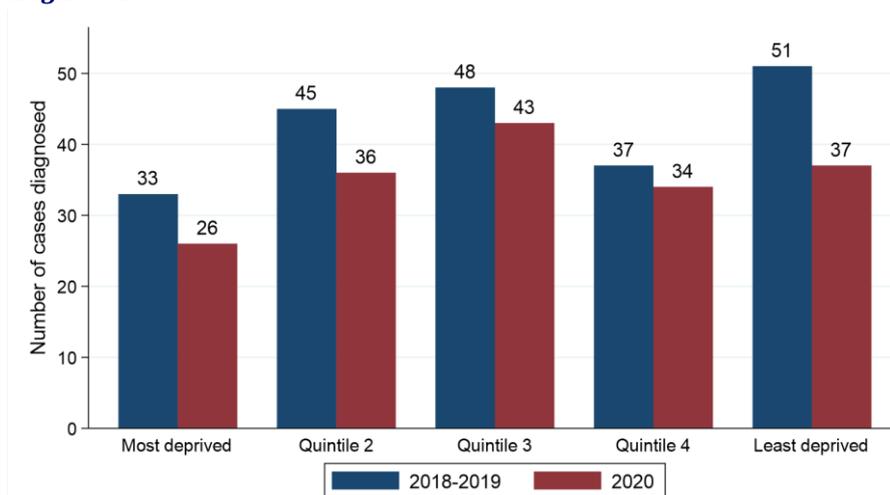
Deprivation quintile	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Most deprived	33 (15.5%)	26 (14.8%)	-21.2% (7 patients)
Quintile 2	45 (21.1%)	36 (20.5%)	-20.0% (9 patients)
Quintile 3	48 (22.5%)	43 (24.4%)	-10.4% (5 patients)
Quintile 4	37 (17.4%)	34 (19.3%)	-8.1% (3 patients)
Least deprived	51 (23.9%)	37 (21.0%)	-27.5% (14 patients)
Northern Ireland	213	176	-17.4% (37 patients)

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

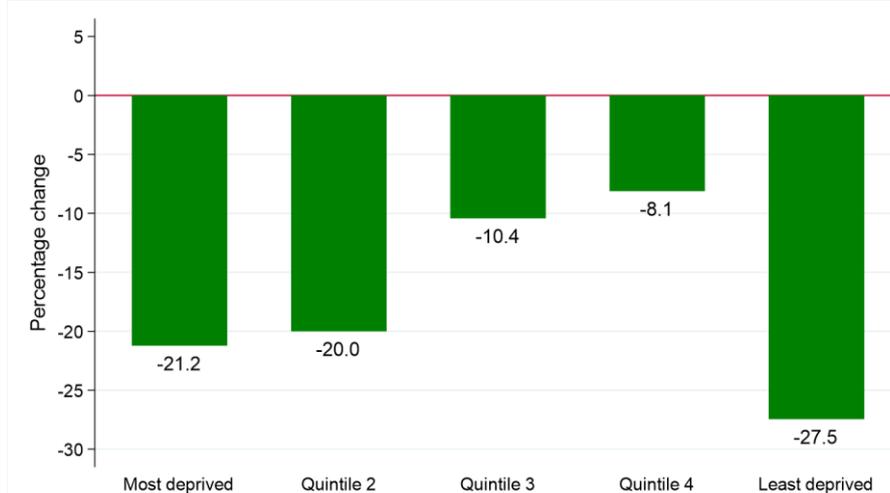
Note: Cases with unknown deprivation quintile are included in totals

**Figure 4: Uterine 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 uterine cancer cases by deprivation quintile



## **BASIS OF DIAGNOSIS**

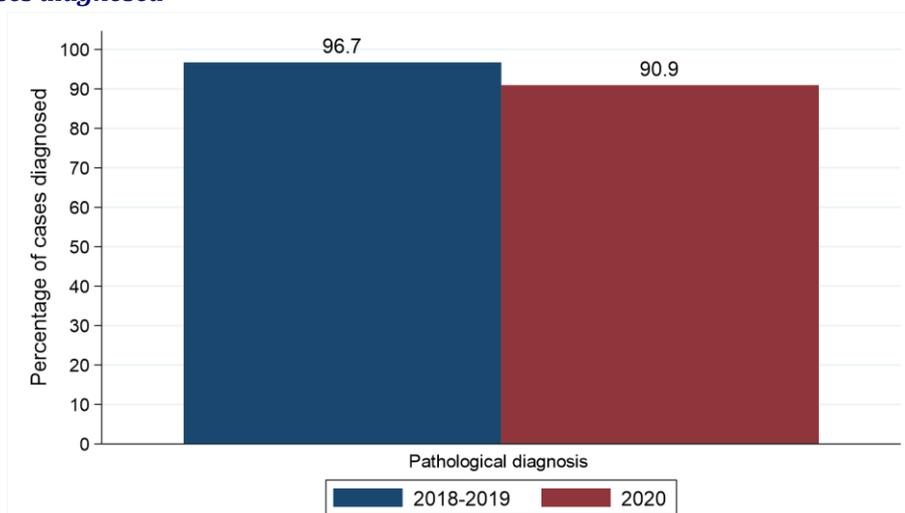
Excluding the first quarter of each year the number of uterine cancer cases diagnosed pathologically decreased by 22.3% from 206 per year in 2018 - 2019 to 160 in 2020, while the number of cases diagnosed clinically increased by 75.0% from 4 per year to 7. The change in case distribution by basis of diagnosis between 2018 - 2019 and 2020 was statistically significant ( $p = 0.019$ ).

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

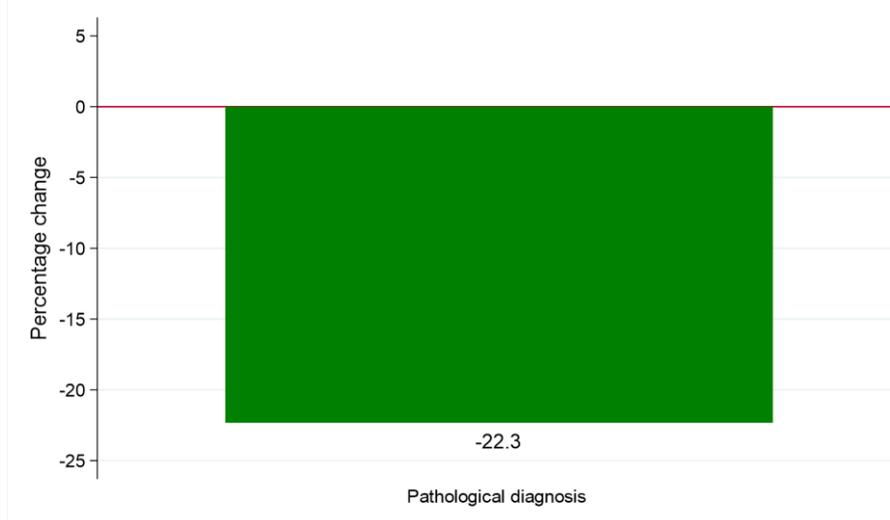
Basis of diagnosis	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
<b>Pathological diagnosis</b>	206 (96.7%)	160 (90.9%)	-22.3% (46 patients)
<b>Clinical diagnosis</b>	4 (1.9%)	7 (4.0%)	+75.0% (3 patients)
<b>Death certificate only</b>	3 (1.4%)	8 (4.5%)	+166.7% (5 patients)
<b>Unknown</b>	1 (0.5%)	1 (0.6%)	0.0% (0 patients)
<b>All groups</b>	213	176	-17.4% (37 patients)

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

**Figure 5: Uterine 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 uterine cancer cases by basis of diagnosis



## STAGE

Excluding the first quarter of each year the number of uterine cancer cases diagnosed at Stage I decreased by 27.1% from 144 per year in 2018 - 2019 to 105 in 2020. There was no change in the number of uterine cancer cases diagnosed at Stage IV each year between 2018 - 2019 and 2020, with an average of 23 cases each year. The change in case distribution by stage at diagnosis between 2018 - 2019 and 2020 was not statistically significant.

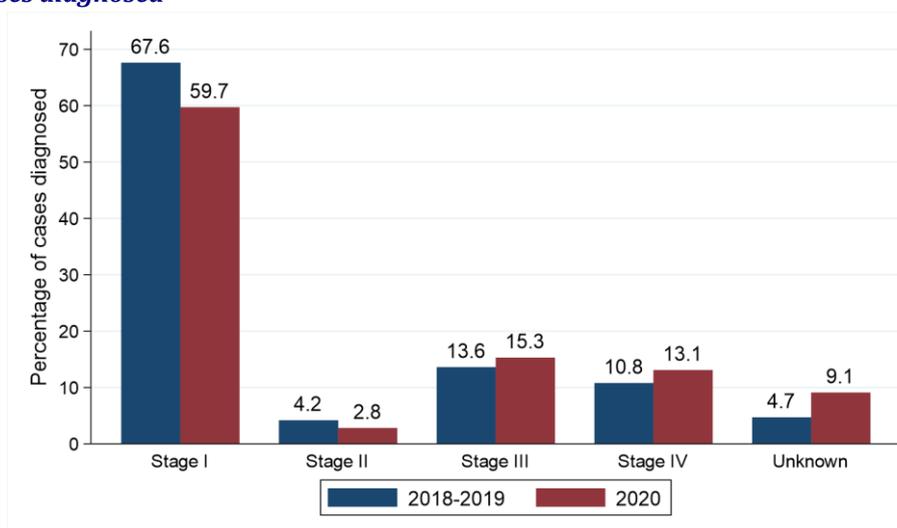
**Table 6: Number and proportion of uterine cancer cases diagnosed in April-December of 2018-2020 by stage at diagnosis and period of diagnosis**

Stage at diagnosis	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Stage I	144 (67.6%)	105 (59.7%)	-27.1% (39 patients)
Stage II	9 (4.2%)	5 (2.8%)	-44.4% (4 patients)
Stage III	29 (13.6%)	27 (15.3%)	-6.9% (2 patients)
Stage IV	23 (10.8%)	23 (13.1%)	0.0% (0 patients)
Unknown	10 (4.7%)	16 (9.1%)	+60.0% (6 patients)
All stages	213	176	-17.4% (37 patients)

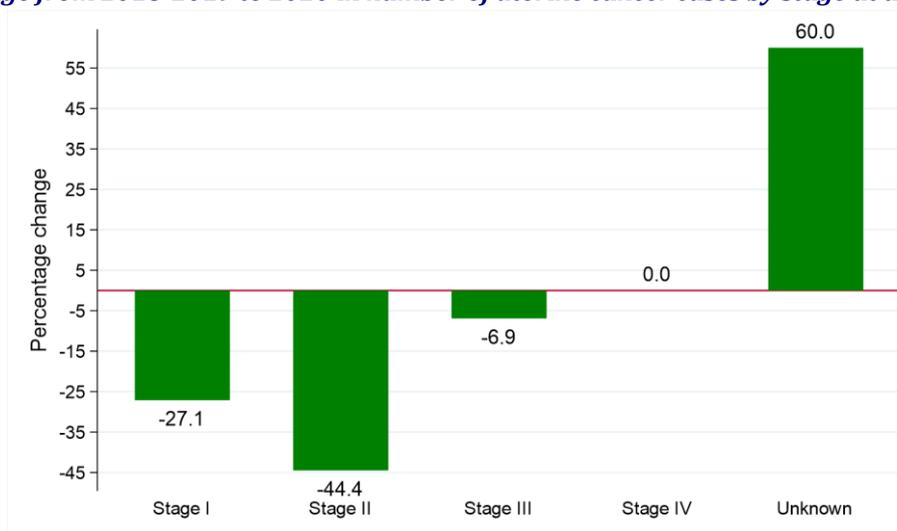
\* Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.

**Figure 6: Uterine 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 uterine cancer cases by stage at diagnosis**



## METHOD OF HOSPITAL ADMISSION

Excluding the first quarter of each year there was no change between 2018 - 2019 and 2020 in the number of cases where the patient had an emergency admission recorded as the most recent hospital admission type up to 30 days prior to diagnosis, with an average of 15 cases each year. The change in case distribution by hospital admission type between 2018 - 2019 and 2020 was not statistically significant.

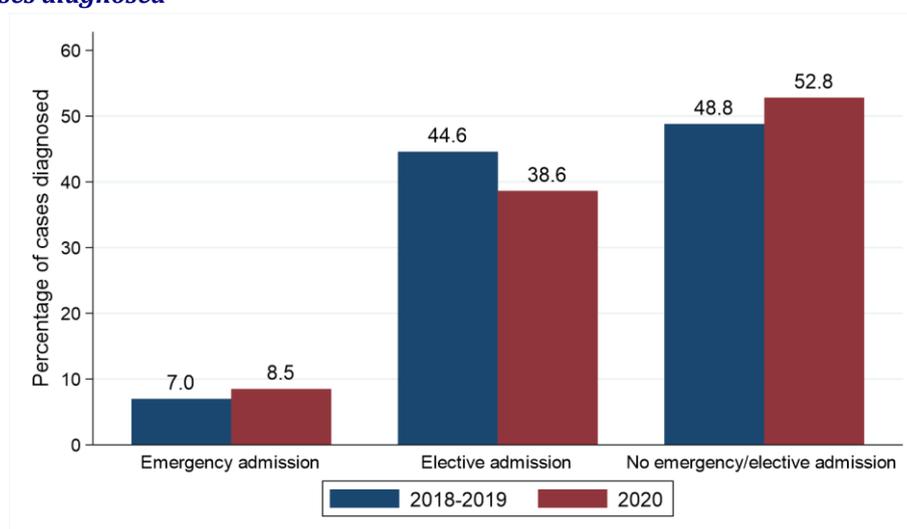
**Table 7: Number and proportion of uterine cancer cases diagnosed in April-December of 2018-2020 by method of admission to hospital and period of diagnosis**

Method of admission to hospital	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Emergency admission	15 (7.0%)	15 (8.5%)	0.0% (0 patients)
Elective admission	95 (44.6%)	68 (38.6%)	-28.4% (27 patients)
No emergency/elective admission recorded	104 (48.8%)	93 (52.8%)	-10.6% (11 patients)
All persons	213	176	-17.4% (37 patients)

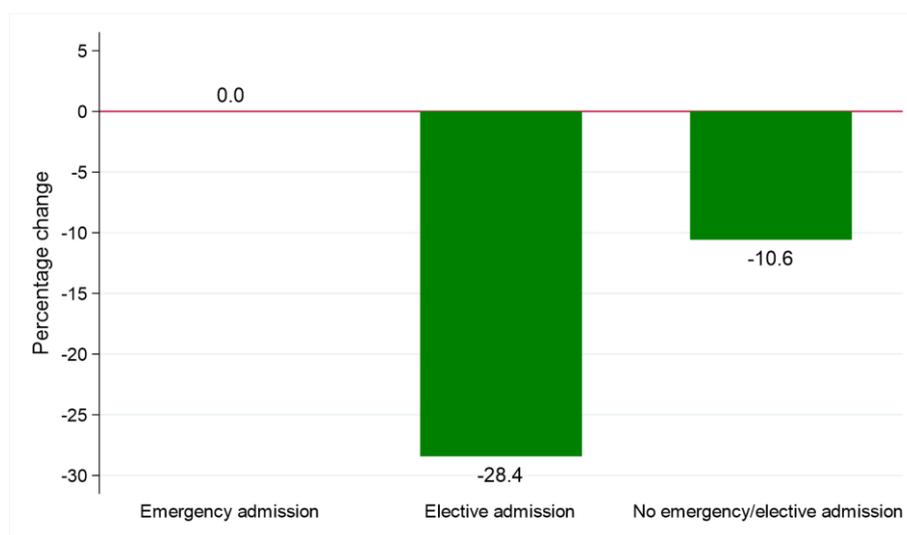
\* Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.

**Figure 7: Uterine 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 uterine cancer cases by method of admission to hospital**



## TREATMENT

Excluding the first quarter of each year the number of uterine cancer cases where the patient was treated with surgery (within six months of diagnosis) decreased by 28.4% from 169 per year for those diagnosed in 2018 - 2019 to 121 for those diagnosed in 2020. The resulting change in the proportion receiving surgery from 79.3% in 2018 - 2019 to 68.8% in 2020 was statistically significant ( $p = 0.007$ ).

Between the same two time periods the number of cases where the patient was treated with chemotherapy (within six months) decreased by 16.7% from 36 per year to 30. The resulting change in the proportion receiving chemotherapy from 16.9% in 2018 - 2019 to 17.0% in 2020 was not statistically significant.

The number of uterine cancer cases where the patient was treated with radiotherapy (within six months of diagnosis) increased by 25.5% from 47 per year for those diagnosed in April-December of 2018 - 2019 to 59 for those diagnosed in April-December of 2020. The resulting change in the proportion receiving radiotherapy from 22.1% in 2018 - 2019 to 33.5% in 2020 was statistically significant ( $p = 0.003$ ).

Between the same two time periods the number of cases where the patient was treated with hormone therapy (within six months) decreased by 23.5% from 17 per year to 13. The resulting change in the proportion receiving hormone therapy from 8.0% in 2018 - 2019 to 7.4% in 2020 was not statistically significant.

The proportion of patients receiving none of surgery, chemotherapy, radiotherapy or hormone therapy (within six months of diagnosis) who were diagnosed in April-December 2020 was 18.2%. This compared to 10.8% of those diagnosed in 2018 - 2019. This change was statistically significant ( $p = 0.011$ ).

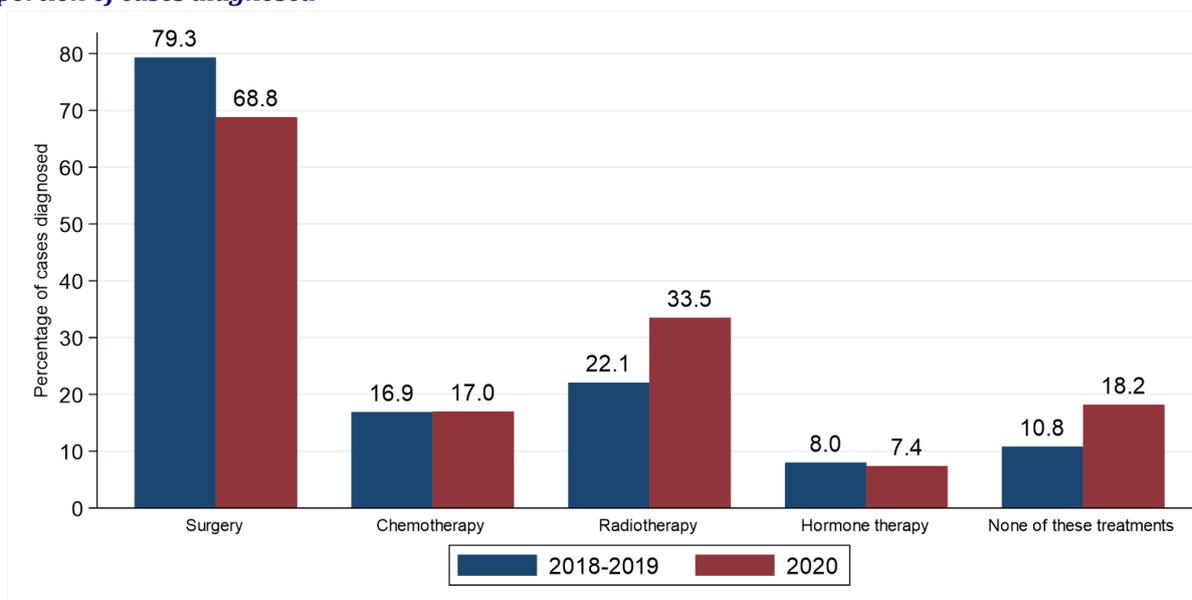
**Table 8: Number and proportion of uterine cancer cases diagnosed in April-December of 2018-2020 by treatment type and period of diagnosis**

Treatment type	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019 average	2020	
<b>Surgery</b>	169 (79.3%)	121 (68.8%)*	-28.4% (48 patients)
<b>Chemotherapy</b>	36 (16.9%)	30 (17.0%)	-16.7% (6 patients)
<b>Radiotherapy</b>	47 (22.1%)	59 (33.5%)*	+25.5% (12 patients)
<b>Hormone therapy</b>	17 (8.0%)	13 (7.4%)	-23.5% (4 patients)
<b>None of these treatments</b>	23 (10.8%)	32 (18.2%)*	+39.1% (9 patients)

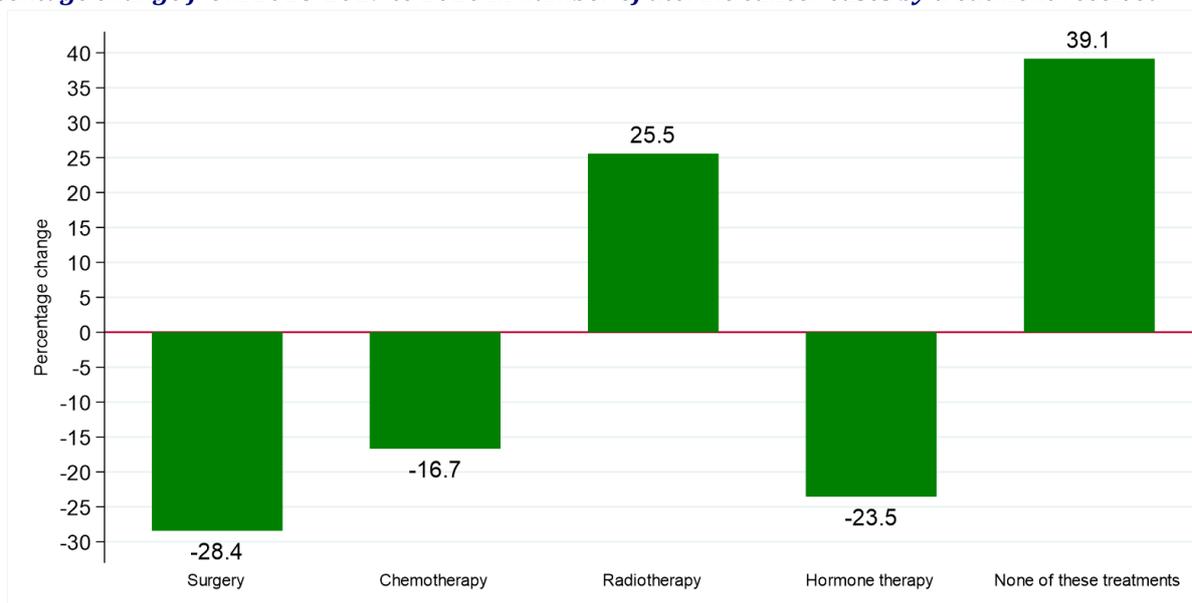
\* Statistically significant change

**Figure 8: Uterine 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 uterine 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

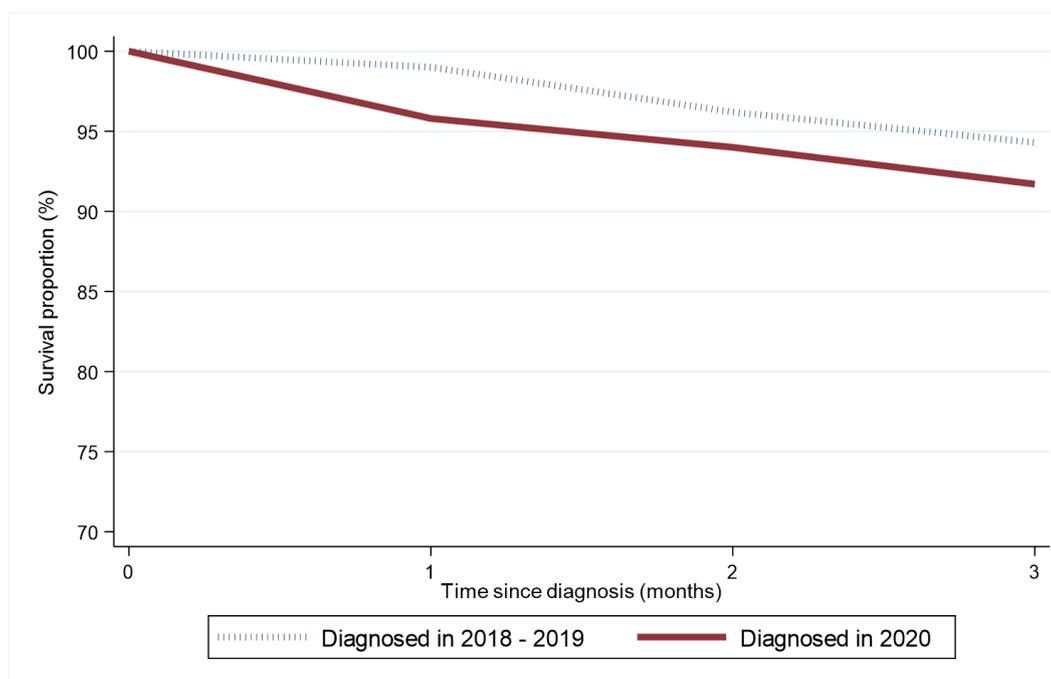
Survival among uterine cancer patients one month after diagnosis decreased from 99.0% among those diagnosed in April-December of 2018 - 2019 to 95.8% among those diagnosed in April-December of 2020. This change was not statistically significant. Between the same two diagnosis periods, three-month survival decreased from 94.3% to 91.7%. This change was not statistically significant.

**Table 9: Observed survival for patients with uterine 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>	99.0% (97.5% - 99.6%)	95.8% (91.5% - 98.0%)
<b>2 months</b>	96.2% (93.9% - 97.7%)	94.0% (89.2% - 96.8%)
<b>3 months</b>	94.3% (91.6% - 96.1%)	91.7% (86.3% - 95.0%)

*No statistically significant reductions*

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



## DEATHS FROM COVID-19

During 2020 there were a total of 11 deaths from Covid-19 among uterine cancer patients diagnosed at any point since 1993. Among the patients who died of Covid-19, 1 were diagnosed with uterine cancer in 2020, while 2 were diagnosed in 2019.

## NET SURVIVAL

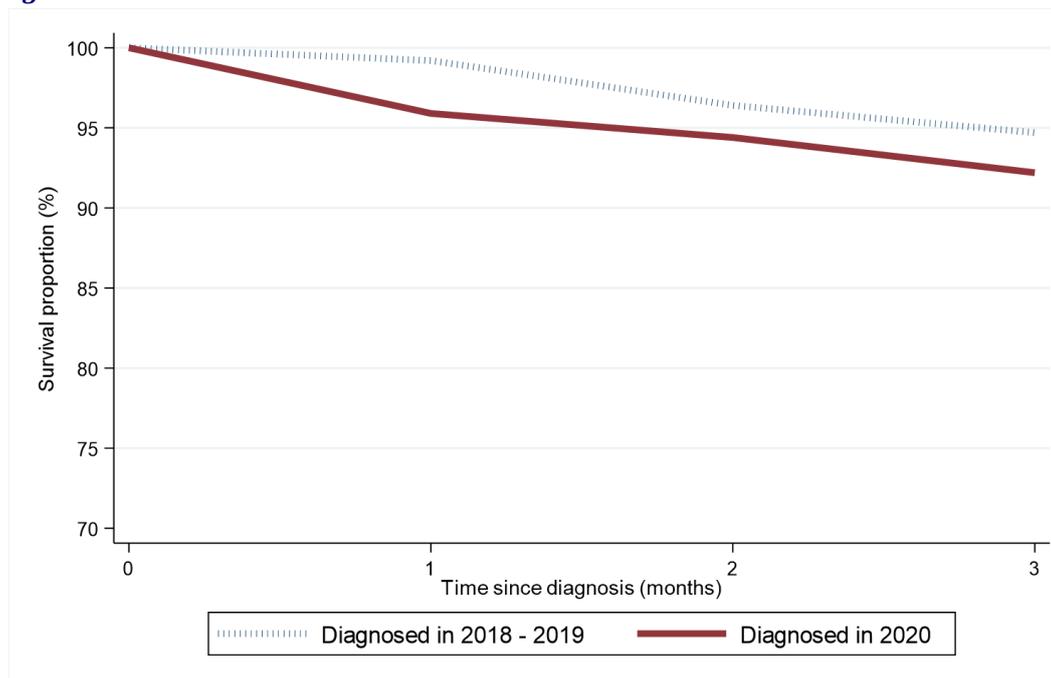
Age-standardised net survival (which takes account of deaths from other causes such as Covid-19) among uterine cancer patients one month after diagnosis decreased from 99.2% among those diagnosed in April-December of 2018 - 2019 to 95.9% among those diagnosed in April-December of 2020. This change was not statistically significant. Between the same two time periods, three-month age-standardised net survival decreased from 94.7% to 92.2%. This change was not statistically significant.

**Table 10: Age-standardised net survival for patients with uterine 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>	99.2% (98.2% - 100.0%)	95.9% (92.9% - 99.0%)
<b>2 months</b>	96.4% (94.5% - 98.3%)	94.4% (90.9% - 98.0%)
<b>3 months</b>	94.7% (92.5% - 97.0%)	92.2% (88.1% - 96.5%)

*No statistically significant reductions*

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



# CANCER MORTALITY

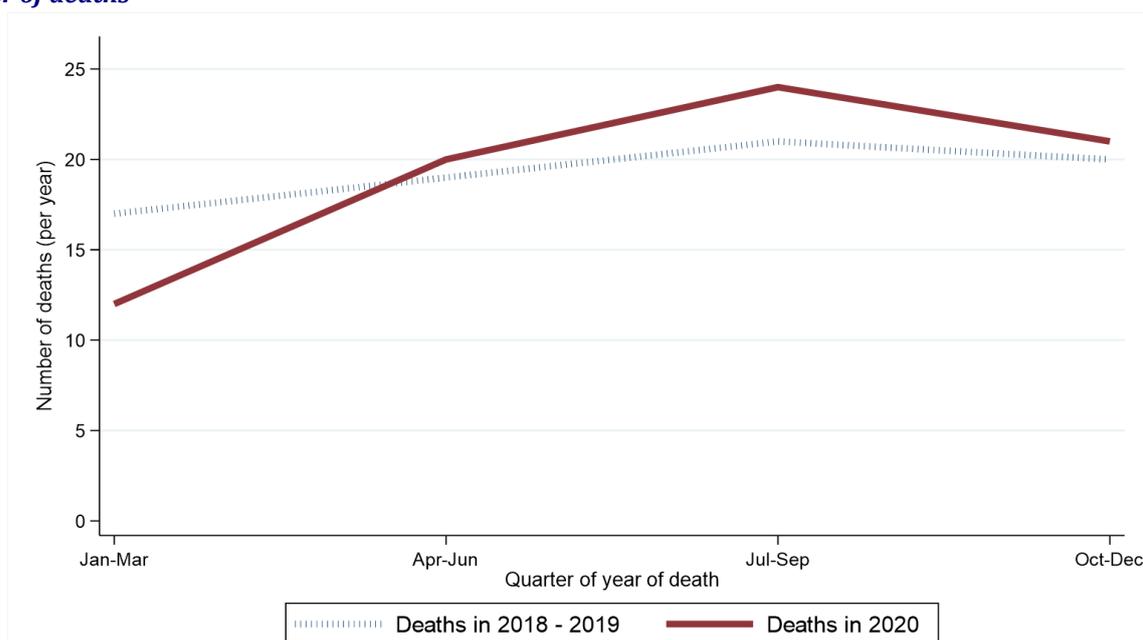
During the April-December period when Covid-19 was present the number of deaths from uterine cancer among females increased by 10.2% from 59 per year in 2018 - 2019 to 65 in 2020.

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

Period of death	Annual total	Quarter of year death occurred			
		Jan-Mar	Apr-Jun	Jul-Sept	Oct-Dec
2018-2019*	75	17	19	21	20
2020	77	12	20	24	21

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

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



(b) Percentage change from 2018-2019 to 2020 in number of uterine cancer deaths by quarter of year of death

