Impact of Covid-19 on incidence and survival of thyroid 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 thyroid cancer diagnosed decreased by 6.2% (7 patients) from 113 per year in 2018 - 2019 to 106 in 2020.

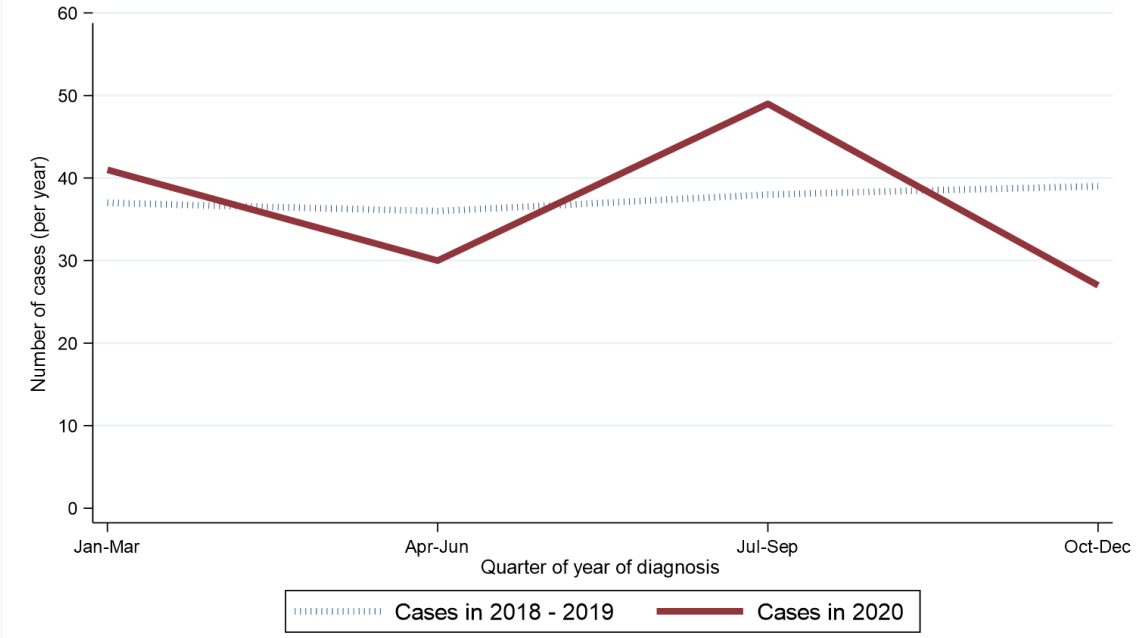
Table 1: Number of thyroid cancer cases diagnosed in 2018-2020 by quarter and year of diagnosis

Period of diagnosis	Annual total	Quarter of year diagnosed			
		Jan-Mar	Apr-Jun	Jul-Sept	Oct-Dec
2018-2019*	149	37	36	38	39
2020	147	41	30	49	27

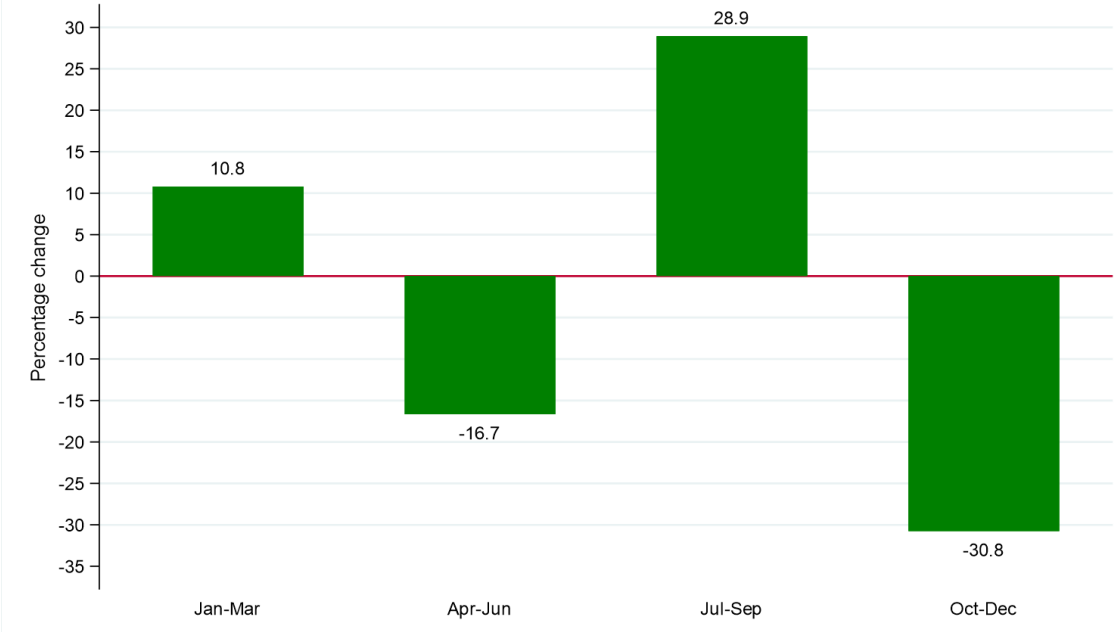
** Average cases per year rounded to the nearest integer. Row sums may thus differ slightly from the total.*

Figure 1: Number of thyroid 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 thyroid cancer cases by quarter of year of diagnosis



GENDER

Excluding the first quarter of each year among males the number of cases of thyroid cancer diagnosed decreased by 14.7% from 34 per year in 2018 - 2019 to 29 in 2020. Between the same two time periods the number of cases among females decreased by 2.5% from 79 per year to 77. The change in case distribution by gender between 2018 - 2019 and 2020 was not statistically significant.

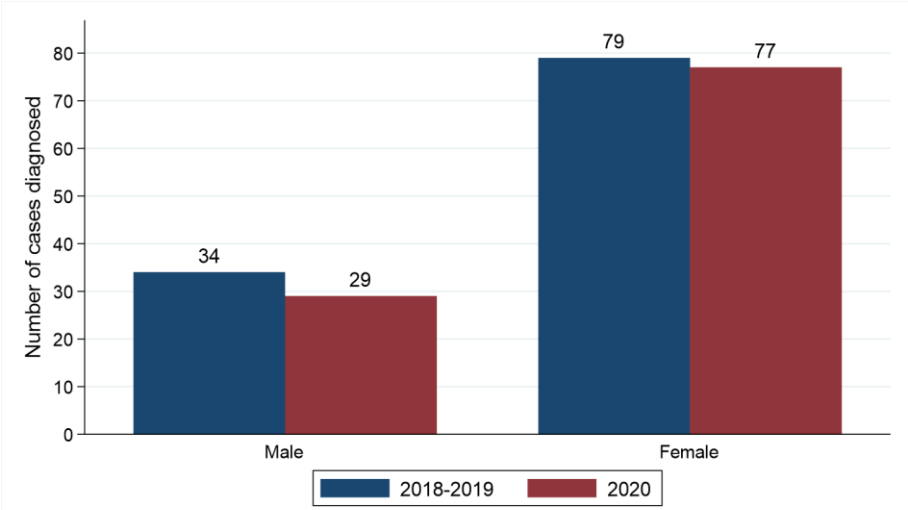
Table 2: Number and proportion of thyroid cancer cases diagnosed in April-December of 2018-2020 by gender and period of diagnosis

Gender	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Male	34 (30.1%)	29 (27.4%)	-14.7% (5 patients)
Female	79 (69.9%)	77 (72.6%)	-2.5% (2 patients)
All persons	113	106	-6.2% (7 patients)

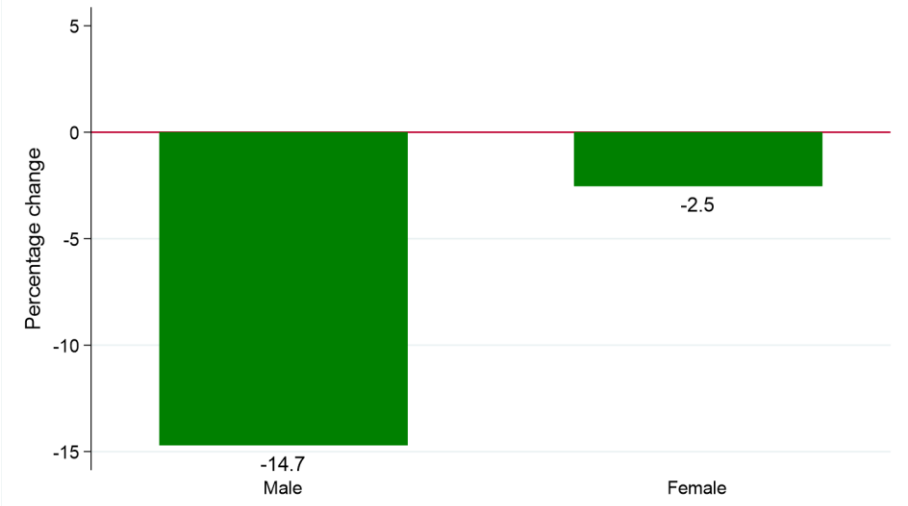
** Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.*

Figure 2: Thyroid 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 thyroid cancer cases by gender



AGE

Excluding the first quarter of each year among people aged 35 to 44 the number of cases of thyroid cancer diagnosed decreased by 33.3% from 24 per year in 2018 - 2019 to 16 in 2020. Between the same two time periods, the number of cases among people aged 0 to 34 increased by 27.8% from 18 per year to 23. The change in case distribution by age between 2018 - 2019 and 2020 was not statistically significant.

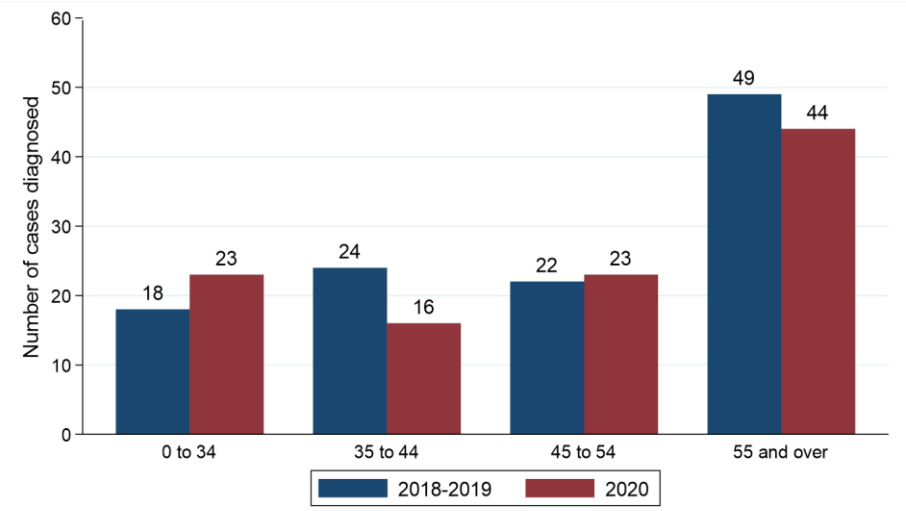
Table 3: Number and proportion of thyroid cancer cases diagnosed in April-December of 2018-2020 by age and period of diagnosis

Age group	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
0 to 34	18 (15.9%)	23 (21.7%)	+27.8% (5 patients)
35 to 44	24 (21.2%)	16 (15.1%)	-33.3% (8 patients)
45 to 54	22 (19.5%)	23 (21.7%)	+4.5% (1 patient)
55 and over	49 (43.4%)	44 (41.5%)	-10.2% (5 patients)
All ages	113	106	-6.2% (7 patients)

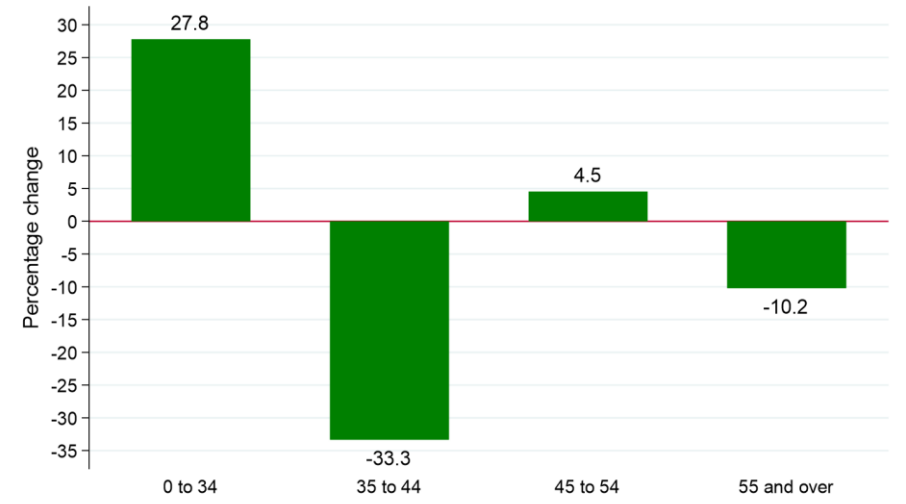
** Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.*

Figure 3: Thyroid 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 thyroid cancer cases by age at diagnosis



HEALTH AND SOCIAL CARE TRUST

Excluding the first quarter of each year among residents of South Eastern HSCT the number of cases of thyroid cancer diagnosed decreased by 37.0% from 27 per year in 2018 - 2019 to 17 in 2020. Between the same two time periods the number of cases among residents of Northern HSCT increased by 26.9% from 26 per year to 33. The change in case distribution by HSCT between 2018 - 2019 and 2020 was not statistically significant.

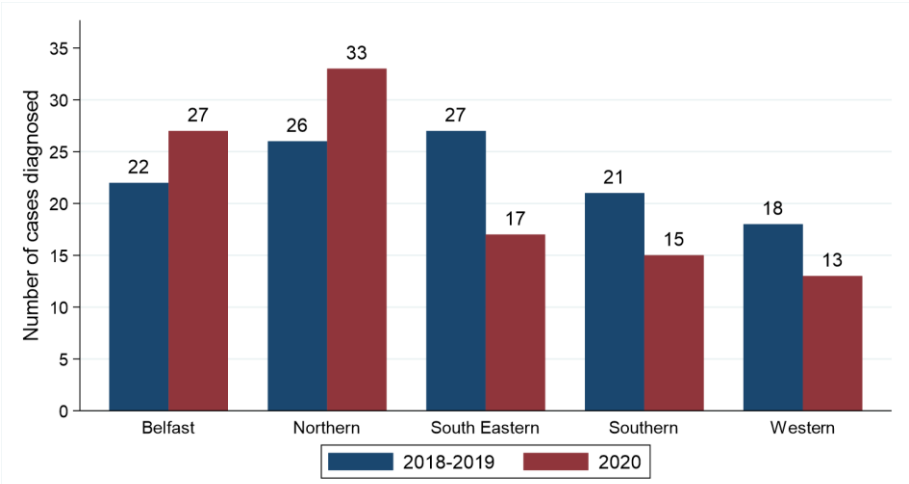
Table 4: Number and proportion of thyroid cancer cases diagnosed in April-December of 2018-2020 by Health and Social Care Trust and period of diagnosis

Health and Social Care Trust	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Belfast HSCT	22 (19.5%)	27 (25.5%)	+22.7% (5 patients)
Northern HSCT	26 (23.0%)	33 (31.1%)	+26.9% (7 patients)
South Eastern HSCT	27 (23.9%)	17 (16.0%)	-37.0% (10 patients)
Southern HSCT	21 (18.6%)	15 (14.2%)	-28.6% (6 patients)
Western HSCT	18 (15.9%)	13 (12.3%)	-27.8% (5 patients)
Northern Ireland	113	106	-6.2% (7 patients)

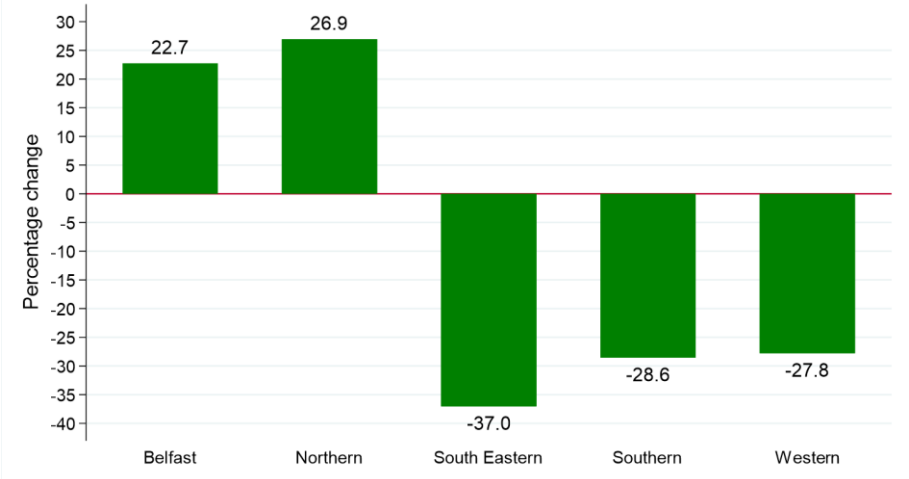
** Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.*
Note: Cases with unknown Health and Social Care Trust are included in totals

Figure 4: Thyroid 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 thyroid cancer cases by Health and Social Care Trust



DEPRIVATION

Among residents of the most deprived areas there was no change in the number of cases per year between 2018 - 2019 and 2020, with an average of 17 cases each year. Between the same two time periods the number of cases among residents of the least deprived areas decreased by 18.5% from 27 per year to 22. The change in case distribution by deprivation quintile between 2018 - 2019 and 2020 was not statistically significant.

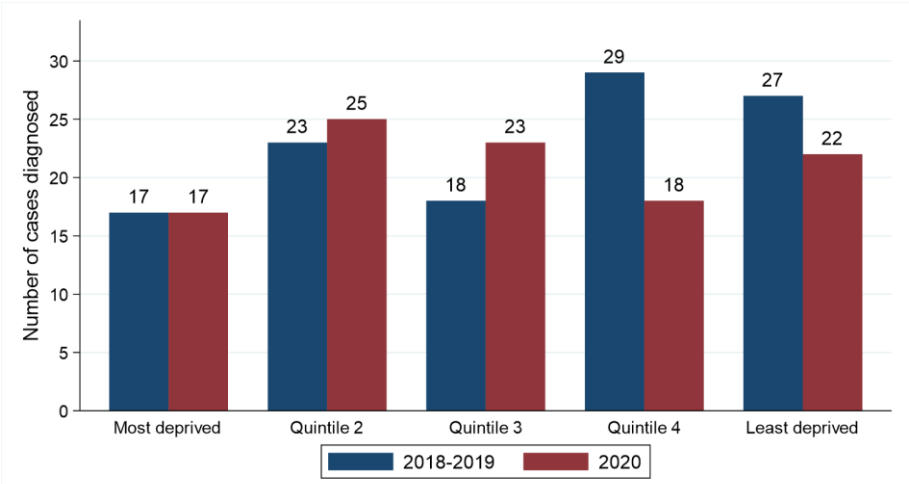
Table 5: Number and proportion of thyroid cancer cases diagnosed in April-December of 2018-2020 by deprivation quintile and period of diagnosis

Deprivation quintile	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Most deprived	17 (15.0%)	17 (16.0%)	0.0% (0 patients)
Quintile 2	23 (20.4%)	25 (23.6%)	+8.7% (2 patients)
Quintile 3	18 (15.9%)	23 (21.7%)	+27.8% (5 patients)
Quintile 4	29 (25.7%)	18 (17.0%)	-37.9% (11 patients)
Least deprived	27 (23.9%)	22 (20.8%)	-18.5% (5 patients)
Northern Ireland	113	106	-6.2% (7 patients)

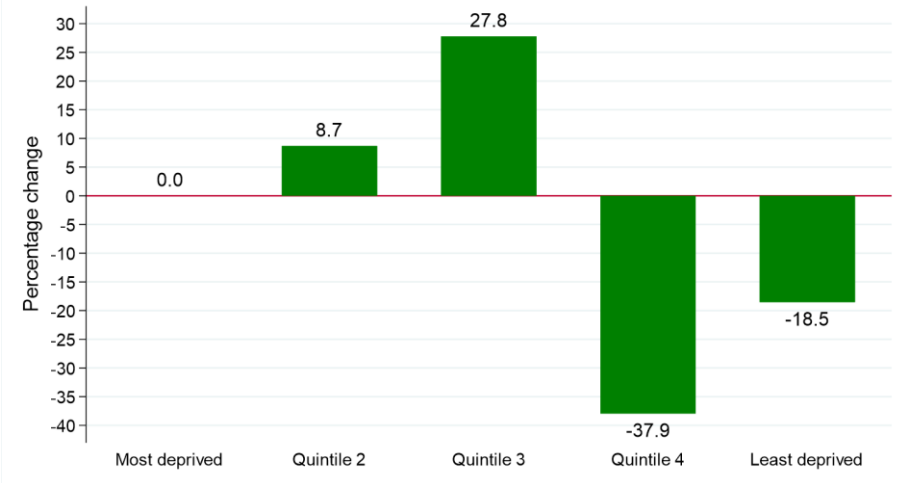
** Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.*
Note: Cases with unknown deprivation quintile are included in totals

Figure 5: Thyroid 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 thyroid cancer cases by deprivation quintile



STAGE

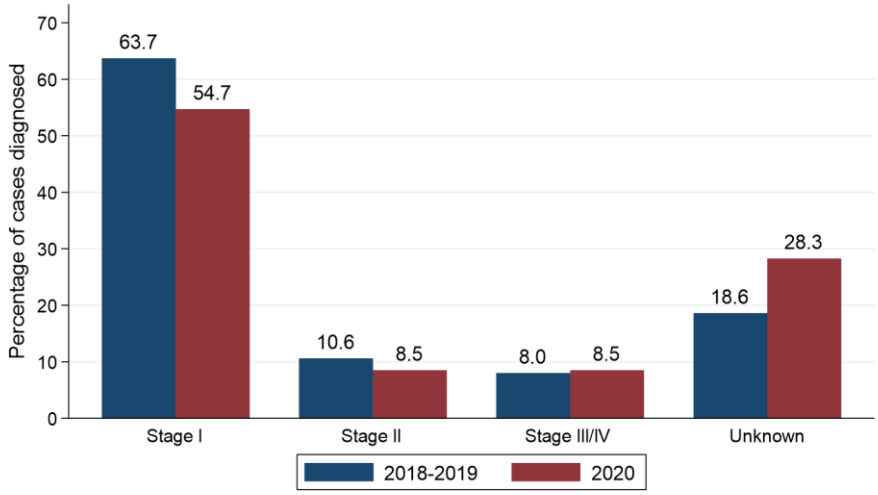
Excluding the first quarter of each year the number of thyroid cancer cases diagnosed at Stage I decreased by 19.4% from 72 per year in 2018 - 2019 to 58 in 2020. There was no change in the number of thyroid cancer cases diagnosed at Stage III/IV each year between 2018 - 2019 and 2020, with an average of 9 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 thyroid cancer cases diagnosed in April-December of 2018-2020 by stage at diagnosis and period of diagnosis

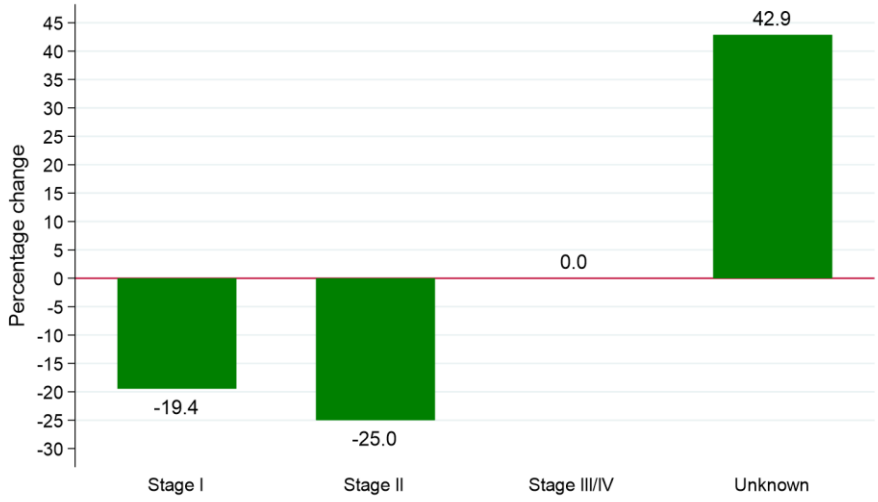
Stage at diagnosis	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Stage I	72 (63.7%)	58 (54.7%)	-19.4% (14 patients)
Stage II	12 (10.6%)	9 (8.5%)	-25.0% (3 patients)
Stage III/IV	9 (8.0%)	9 (8.5%)	0.0% (0 patients)
Unknown	21 (18.6%)	30 (28.3%)	+42.9% (9 patients)
All stages	113	106	-6.2% (7 patients)

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

Figure 6: 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 thyroid cancer cases by stage at diagnosis



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

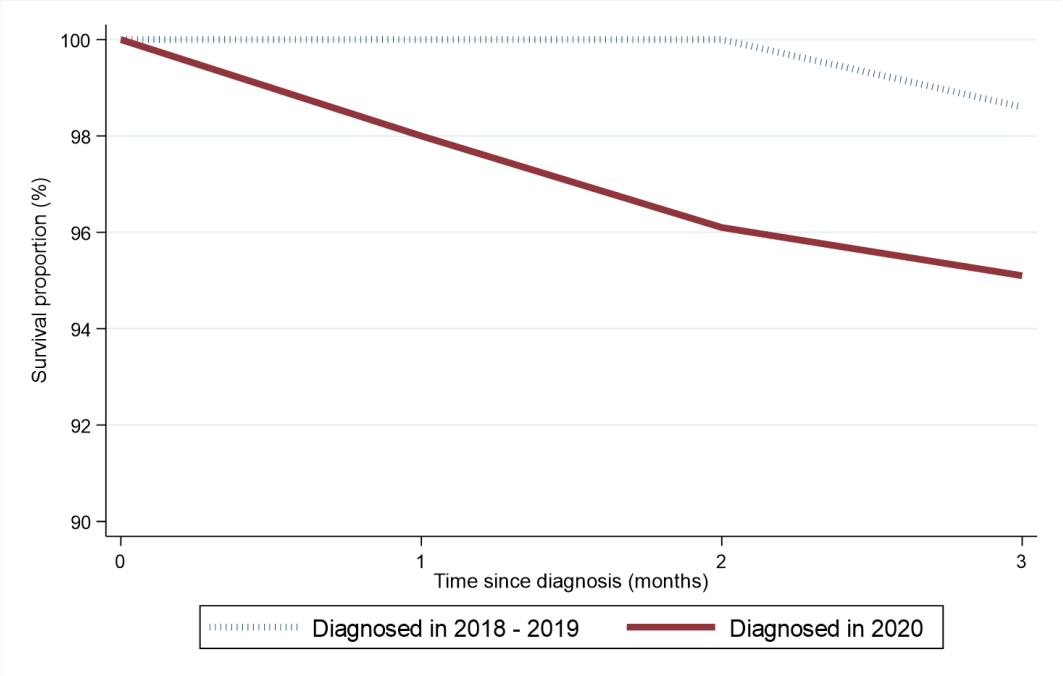
Survival among thyroid cancer patients one month after diagnosis decreased from 100.0% among those diagnosed in April-December of 2018 - 2019 to 98.0% among those diagnosed in April-December of 2020. This change was statistically significant. Between the same two diagnosis periods, three-month survival decreased from 98.6% to 95.1%. This change was not statistically significant.

Table 7: Observed survival for patients with thyroid cancer diagnosed in April-December of 2018-2020 by period of diagnosis

Survival time	Period of diagnosis (Apr-Dec)	
	2018-2019	2020
1 month	100%	98.0% (92.4% - 99.5%)*
2 months	100%	96.1% (89.9% - 98.5%)*
3 months	98.6% (95.8% - 99.6%)	95.1% (88.6% - 97.9%)

** Statistically significant reduction*

Figure 7: Observed survival for patients with thyroid cancer diagnosed in April-December of 2018-2020 by period of diagnosis



NET SURVIVAL

Age-standardised net survival (which takes account of deaths from other causes such as Covid-19) among thyroid cancer patients one month after diagnosis decreased from 100.0% among those diagnosed in April-December of

2018 - 2019 to 97.6% 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 98.5% to 93.6%. This change was not statistically significant.

Table 8: Age-standardised net survival for patients with thyroid cancer diagnosed in April-December of 2018-2020 by period of diagnosis

Survival time	Period of diagnosis (Apr-Dec)	
	2018-2019	2020
1 month	100%	97.6% (94.4% - 100.0%)
2 months	100%	94.8% (89.9% - 100.0%)
3 months	98.5% (96.8% - 100.0%)	93.6% (88.3% - 99.3%)

No statistically significant reductions

Figure 8: Age-standardised net survival for patients with thyroid cancer diagnosed in April-December of 2018-2020 by period of diagnosis