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# Impact of Covid-19 on incidence and survival of testicular 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

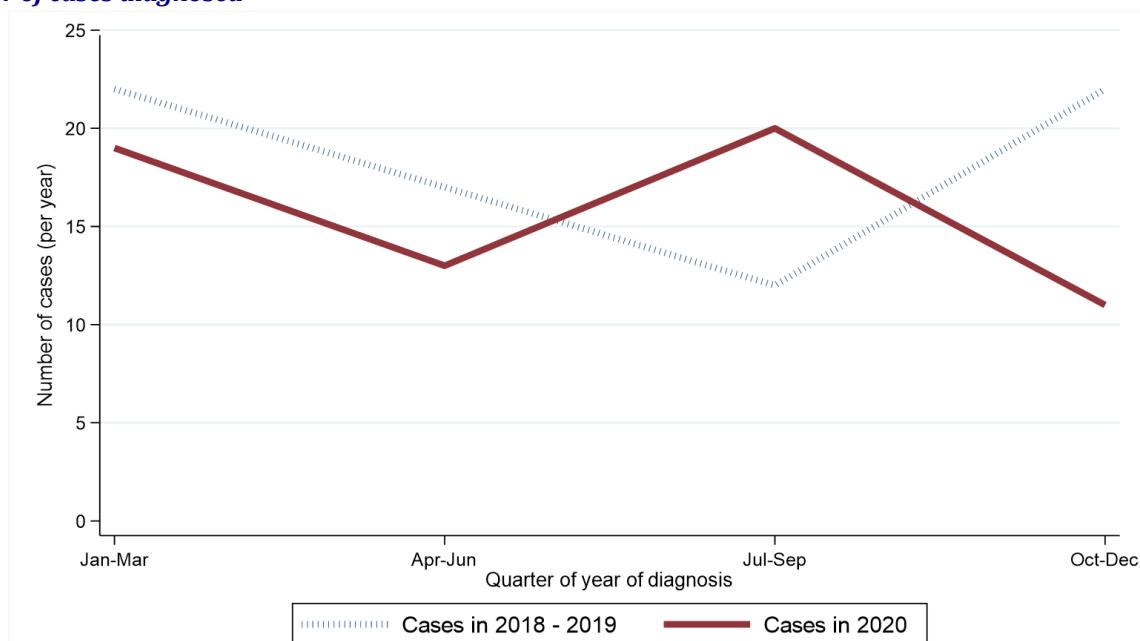
During the April-December period when Covid-19 was present the number of cases of testicular cancer diagnosed among males decreased by 13.7% (7 patients) from 51 per year in 2018 - 2019 to 44 in 2020.

**Table 1: Number of testicular 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*	73	22	17	12	22
2020	63	19	13	20	11

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

**Figure 1: Number of testicular 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 testicular cancer cases by quarter of year of diagnosis**



## AGE

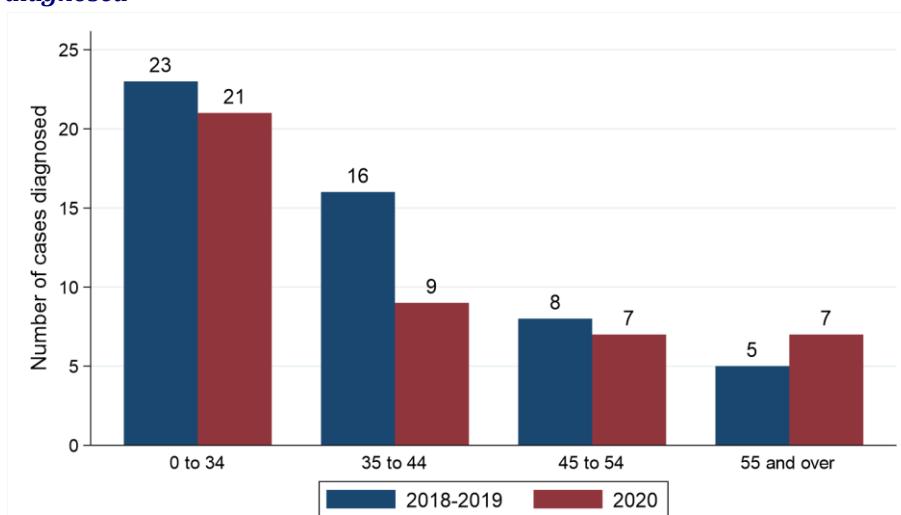
Excluding the first quarter of each year among people aged 35 to 44 the number of cases of testicular cancer diagnosed decreased by 43.8% from 16 per year in 2018 - 2019 to 9 in 2020. Between the same two time periods, the number of cases among people aged 55 and over increased by 40.0% from 5 per year to 7. The change in case distribution by age between 2018 - 2019 and 2020 was not statistically significant.

**Table 2: Number and proportion of testicular 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	23 (45.1%)	21 (47.7%)	-8.7% (2 patients)
35 to 44	16 (31.4%)	9 (20.5%)	-43.8% (7 patients)
45 to 54	8 (15.7%)	7 (15.9%)	-12.5% (1 patients)
55 and over	5 (9.8%)	7 (15.9%)	+40.0% (2 patients)
All ages	51	44	-13.7% (7 patients)

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

**Figure 2: Testicular 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 testicular 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 testicular cancer diagnosed decreased by 30.0% from 10 per year in 2018 - 2019 to 7 in 2020. Between the same two time periods the number of cases among residents of Western HSCT increased by 25.0% from 8 per year to 10. The change in case distribution by HSCT between 2018 - 2019 and 2020 was not statistically significant.

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

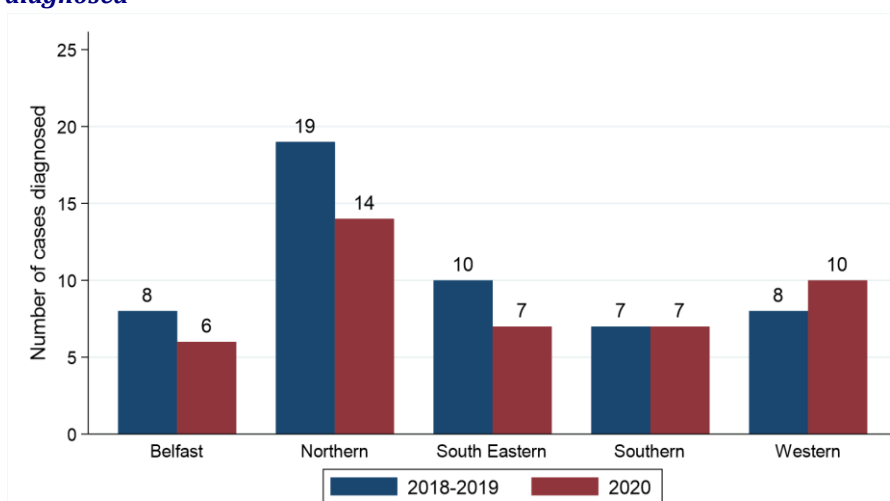
Health and Social Care Trust	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Belfast HSCT	8 (15.7%)	6 (13.6%)	-25.0% (2 patients)
Northern HSCT	19 (37.3%)	14 (31.8%)	-26.3% (5 patients)
South Eastern HSCT	10 (19.6%)	7 (15.9%)	-30.0% (3 patients)
Southern HSCT	7 (13.7%)	7 (15.9%)	0.0% (0 patients)
Western HSCT	8 (15.7%)	10 (22.7%)	+25.0% (2 patients)
Northern Ireland	51	44	-13.7% (7 patients)

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

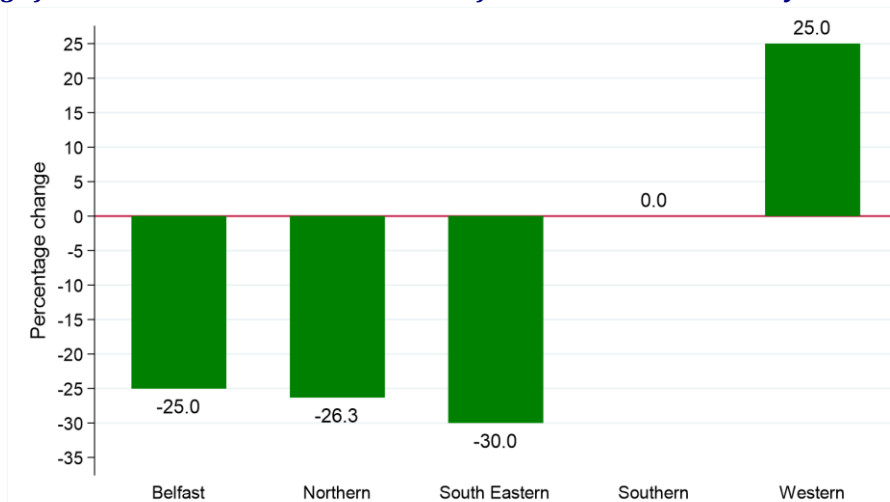
Note: Cases with unknown Health and Social Care Trust are included in totals

**Figure 3: Testicular 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 testicular 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 testicular cancer diagnosed increased by 44.4% from 9 per year in 2018 - 2019 to 13 in 2020. Between the same two time periods the number of cases among residents of the least deprived areas decreased by 54.5% from 11 per year to 5. The change in case distribution by deprivation quintile between 2018 - 2019 and 2020 was not statistically significant.

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

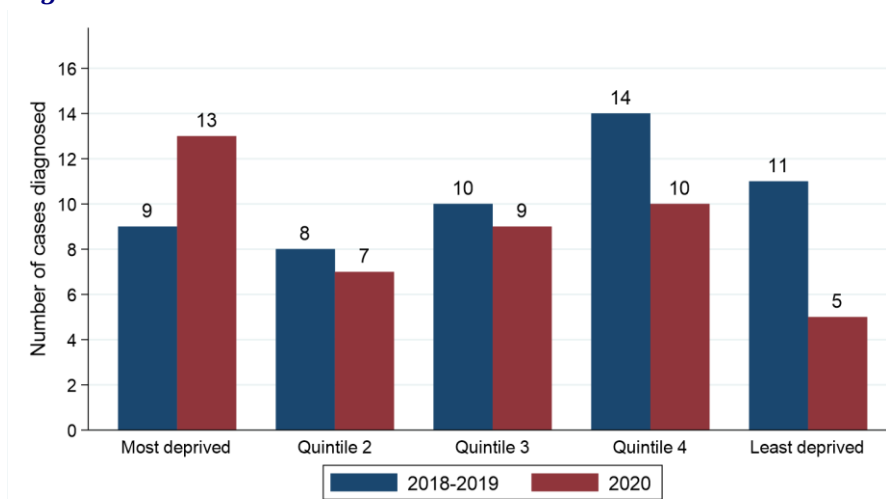
Deprivation quintile	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Most deprived	9 (17.6%)	13 (29.5%)	+44.4% (4 patients)
Quintile 2	8 (15.7%)	7 (15.9%)	-12.5% (1 patients)
Quintile 3	10 (19.6%)	9 (20.5%)	-10.0% (1 patients)
Quintile 4	14 (27.5%)	10 (22.7%)	-28.6% (4 patients)
Least deprived	11 (21.6%)	5 (11.4%)	-54.5% (6 patients)
Northern Ireland	51	44	-13.7% (7 patients)

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

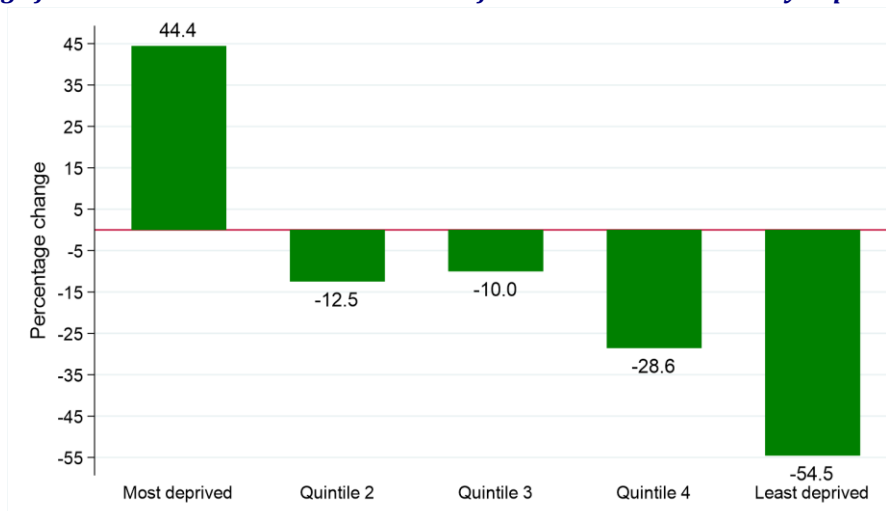
Note: Cases with unknown deprivation quintile are included in totals

**Figure 4: Testicular 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 testicular cancer cases by deprivation quintile**



## STAGE

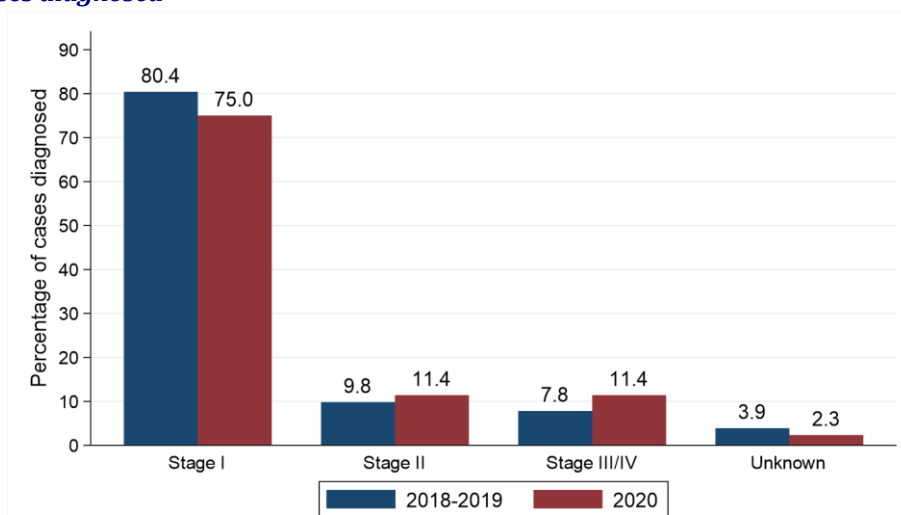
Excluding the first quarter of each year the number of testicular cancer cases diagnosed at Stage I decreased by 19.5% from 41 per year in 2018 - 2019 to 33 in 2020. Between the same two time periods the number of cases diagnosed at Stage III/IV increased by 25.0% from 4 per year to 5. The change in case distribution by stage at diagnosis between 2018 - 2019 and 2020 was not statistically significant.

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

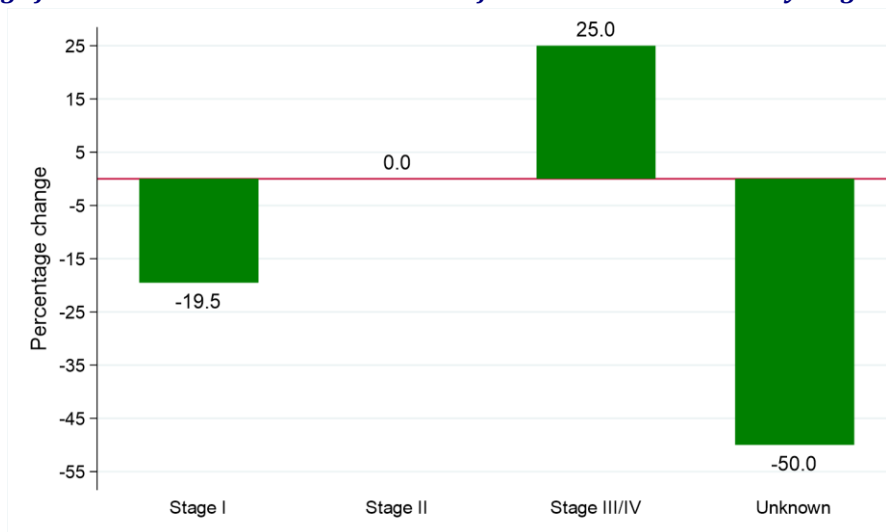
Stage at diagnosis	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Stage I	41 (80.4%)	33 (75.0%)	-19.5% (8 patients)
Stage II	5 (9.8%)	5 (11.4%)	0.0% (0 patients)
Stage III/IV	4 (7.8%)	5 (11.4%)	+25.0% (1 patients)
Unknown	2 (3.9%)	1 (2.3%)	-50.0% (1 patients)
<b>All stages</b>	<b>51</b>	<b>44</b>	<b>-13.7% (7 patients)</b>

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

**Figure 5: Testicular 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 testicular cancer cases by stage at diagnosis



## METHOD OF HOSPITAL ADMISSION

Excluding the first quarter of each year the number of cases of testicular 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 50.0% from 6 per year in 2018 - 2019 to 3 in 2020. The change in case distribution by hospital admission type between 2018 - 2019 and 2020 was not statistically significant.

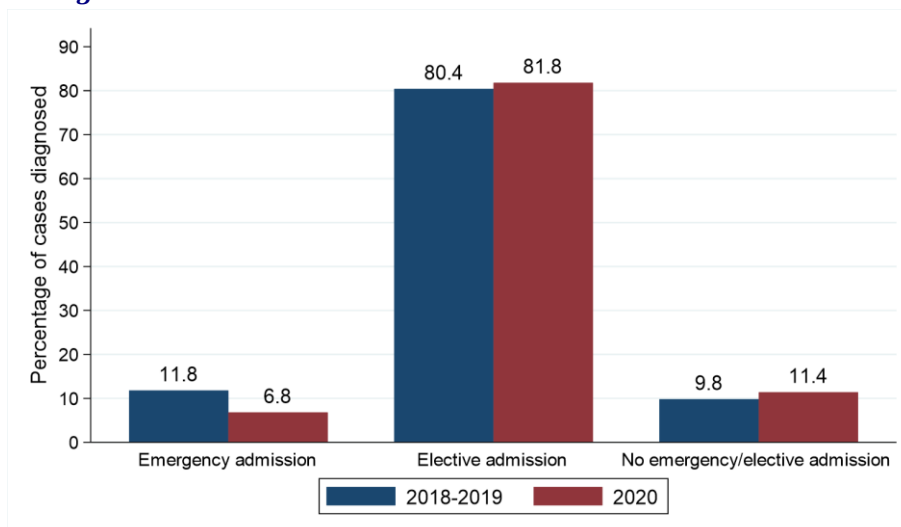
**Table 6: Number and proportion of testicular cancer cases diagnosed in April-December of 2018-2020 by method of admission to hospital and period of diagnosis**

Method of admission to hospital	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Emergency admission	6 (11.8%)	3 (6.8%)	-50.0% (3 patients)
Elective admission	41 (80.4%)	36 (81.8%)	-12.2% (5 patients)
No emergency/elective admission recorded	5 (9.8%)	5 (11.4%)	0.0% (0 patients)
All persons	51	44	-13.7% (7 patients)

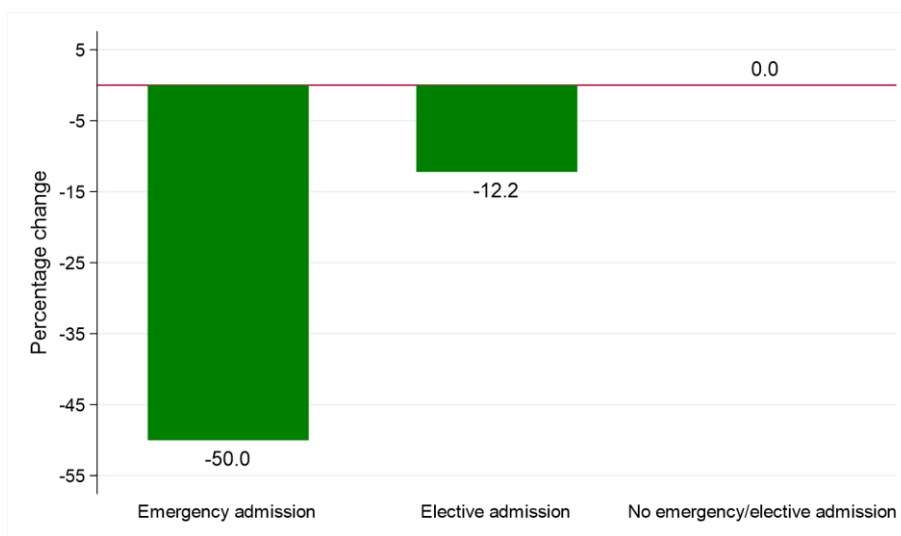
\* Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.

**Figure 6: Testicular 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 testicular cancer cases by method of admission to hospital**



## TREATMENT

Excluding the first quarter of each year the number of testicular cancer cases where the patient was treated with surgery (within six months of diagnosis) decreased by 7.0% from 43 per year for those diagnosed in 2018 - 2019 to 40 for those diagnosed in 2020. The resulting change in the proportion receiving surgery from 84.3% in 2018 - 2019 to 90.9% 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 6.7% from 30 per year to 28. The resulting change in the proportion receiving chemotherapy from 58.8% in 2018 - 2019 to 63.6% in 2020 was not statistically significant.

The proportion of patients receiving none of surgery or chemotherapy (within six months of diagnosis) who were diagnosed in April-December 2020 was 4.5%. This compared to 5.9% of those diagnosed in 2018 - 2019. This change was not statistically significant.

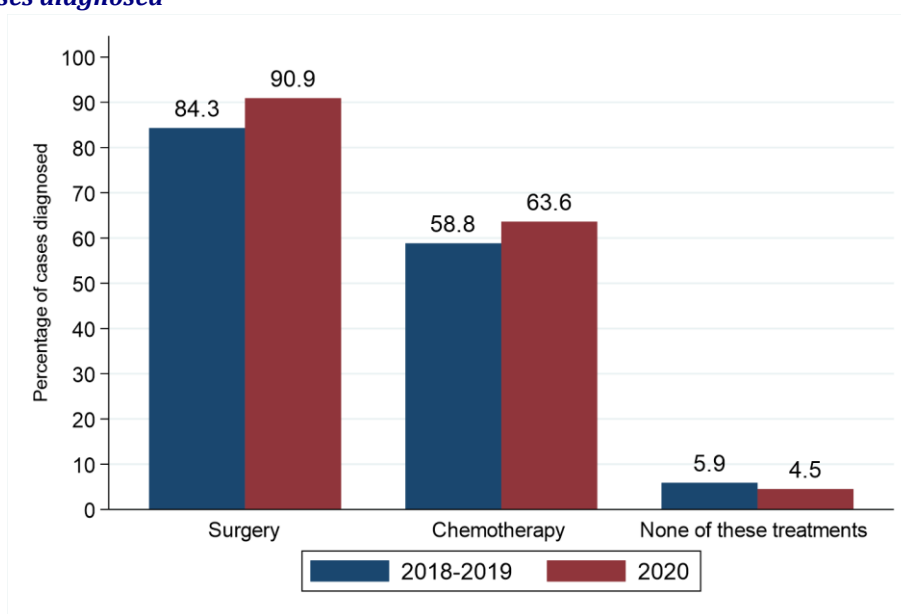
**Table 7: Number and proportion of testicular cancer cases diagnosed in April-December of 2018-2020 by treatment type and period of diagnosis**

Treatment type	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019 average	2020	
<b>Surgery</b>	43 (84.3%)	40 (90.9%)	-7.0% (3 patients)
<b>Chemotherapy</b>	30 (58.8%)	28 (63.6%)	-6.7% (2 patients)
<b>None of these treatments</b>	3 (5.9%)	2 (4.5%)	-33.3% (1 patients)

*No statistically significant changes*

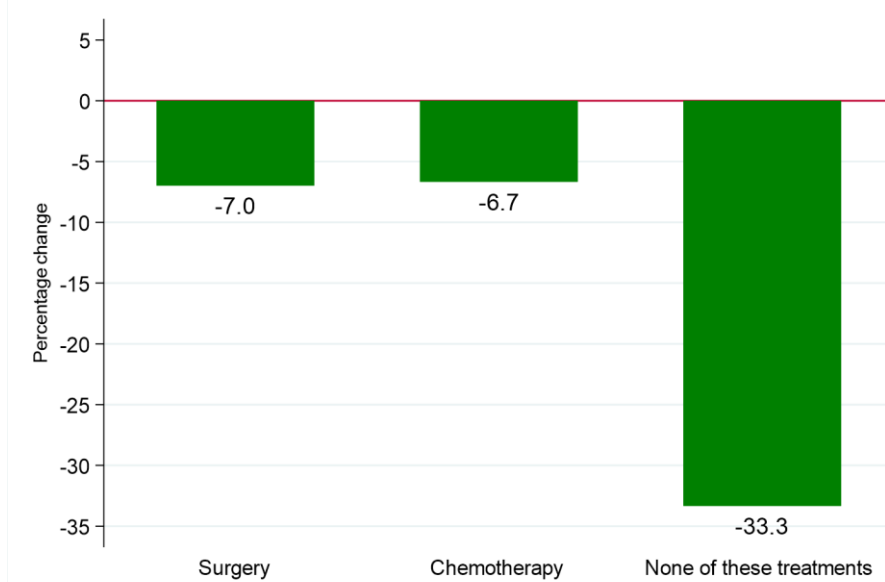
**Figure 7: Testicular cancer cases diagnosed in April-December of 2018-2020 by treatment received and period of diagnosis**

**(a) Proportion of cases diagnosed**





*(b) Percentage change from 2018-2019 to 2020 in number of testicular 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

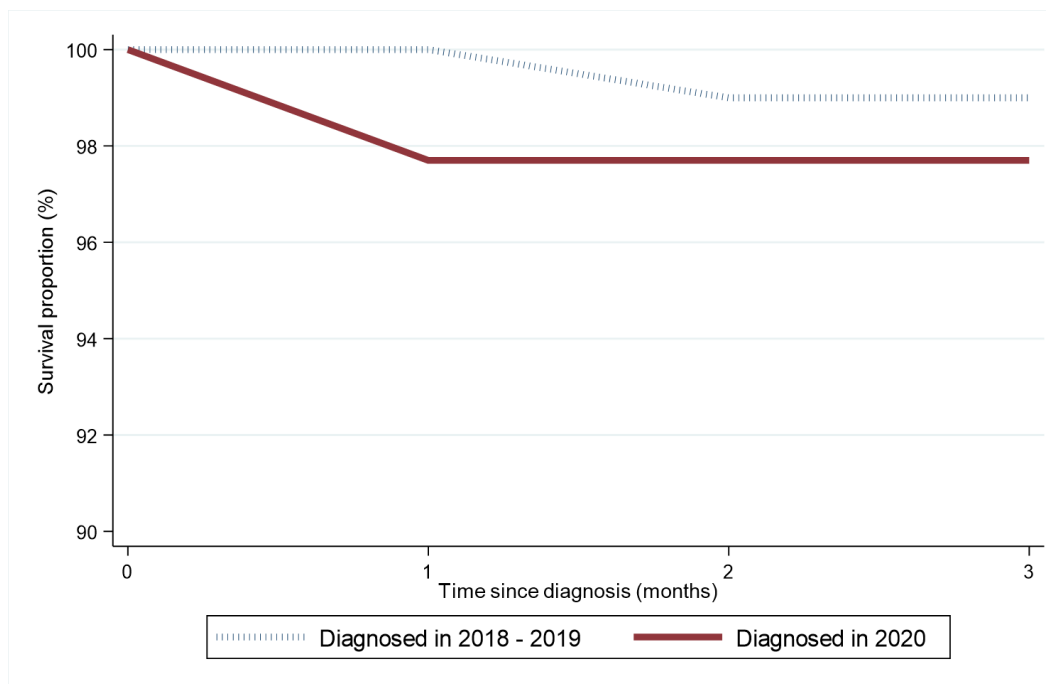
Survival among testicular cancer patients one month after diagnosis decreased from 100.0% among those diagnosed in April-December of 2018 - 2019 to 97.7% among those diagnosed in April-December of 2020. This change was statistically significant. Between the same two diagnosis periods, three-month survival decreased from 99.0% to 97.7%. This change was not statistically significant.

**Table 8: Observed survival for patients with testicular 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>	100%	97.7% (84.9% - 99.7%)*
<b>2 months</b>	99.0% (93.0% - 99.9%)	97.7% (84.9% - 99.7%)
<b>3 months</b>	99.0% (93.0% - 99.9%)	97.7% (84.9% - 99.7%)

\* Statistically significant reduction

**Figure 8: Observed survival for patients with testicular 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 testicular cancer patients one month after diagnosis decreased from 100.0% among those diagnosed in April-

December of 2018 - 2019 to 97.8% 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 99.3% to 97.8%. This change was not statistically significant.

**Table 9: Age-standardised net survival for patients with testicular 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>	100%	97.8% (93.5% - 100.0%)
<b>2 months</b>	99.3% (97.9% - 100.0%)	97.8% (93.5% - 100.0%)
<b>3 months</b>	99.3% (97.9% - 100.0%)	97.8% (93.5% - 100.0%)

*No statistically significant reductions*

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

