



COVID-19 and cancer services

Report 3

Working report on the impact of COVID-19 on cancer services for the period ending June 2020

August 2020

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Summary of findings

Overview of impact of COVID-19 on cancer diagnosis and treatment

There has been a substantial increase in new cancer registrations and diagnostic procedures in June compared to May 2020. This report shows that we are catching up on the dip in cancer registrations seen over the lockdown period. The overall number of diagnostic procedures and new cancer registrations in 2020 remains lower than 2019. Cancer treatment services – surgery, medical oncology, radiation oncology and haematology – continued during the COVID-19 lockdown and continue to be delivered at pre-COVID volumes.

Background and data

- This is the third report looking at the impact of COVID-19 on cancer services. This report looks at the period until the end of June 2020, the first full month out of national alert levels 3 and 4.
- The purpose of this analysis was to rapidly measure the impact of COVID-19 on cancer services to assist with recovery planning.
- The report focuses on the aspects of the cancer care pathway for which we have readily available data and does not capture all aspects of the care.
- Comparisons between 2020 and 2019 do not consider any projected increase in diagnoses over time.
- The focus of the report was to understand the impact of COVID-19 on existing service delivery and does not address pre-existing unmet need.

Cancer diagnosis

Registrations

- Overall for the year to date (up until end of June 2020), there have been 689 fewer cancer registrations compared to the same time period in 2019, a 4.5% decrease.
- There were 225 more cancers registered in June 2020 compared to June 2019, a 9.2% increase. Māori were the only ethnic group where there remained a decrease in the monthly number of registrations in June 2020 compared to 2019.
- The decrease in cancer registrations for the year to date was relatively similar across all ethnic groups. Over the year to date there was a 5% decrease in registrations for Māori, 2.5% decrease for Pacific and a 5.3% decrease for European/other. There was an increase in registrations for people in the Asian ethnic group.
- The overall impact on registrations for the year to date has been most marked for haematology/lymphoid, melanoma and non-melanoma skin cancer, prostate and breast cancers (all have seen a 10-12% decrease for the year to date).

Diagnostics

- Gastrointestinal endoscopy services increased substantially in June 2020, with a 20% increase in endoscopies performed in June 2020 compared to June 2019.
- Overall, for the year to date there has been 11% fewer gastrointestinal endoscopies performed in 2020 compared to 2019, with Māori having a smaller cumulative reduction (5%) compared to non-Māori/non-Pacific (12%).

- Despite the 11% decrease in colonoscopies for the year to date, there has only been a 1.8% decrease in registrations of colorectal cancer. This suggests that triage systems are operating well within DHBs, with those at highest risk being prioritised to receive their colonoscopies.
- There has been significant work by DHBs to increase the delivery of endoscopies post lockdown. There is ongoing work nationally to address the demand for colonoscopy services.
- Bronchoscopy services have increased in June 2020 compared to May 2020. There was an increase in bronchoscopies performed in June 2020 compared to June 2019. However, there remains a deficit between the number of bronchoscopies performed in 2020 compared to 2019. Overall there were 22% fewer bronchoscopies performed in the first six months of 2020 compared to the first six months of 2019. This appears to have started prior to the lockdown, with fewer bronchoscopies from February 2020. Te Aho o Te Kahu is investigating the cause of variance in bronchoscopies in 2020.

Cancer Treatment

Surgery

- Overall, the impact of COVID-19 on cancer surgery volumes has been minimal, with 2% fewer surgeries performed in the first six months of 2020 compared to the first six months of 2019. There has been an 18% increase in surgery for Māori in 2020 compared to 2019.
- Colorectal cancer surgery returned to pre-COVID volumes in June.
- There was an increase in curative lung cancer surgery in June 2020 compared to June 2019.
- Overall, for the year to date there has been a 5% decrease in curative lung cancer surgeries compared to 2019. This deficit is smaller than the gap seen at the end of May 2020 (9%). The decrease in lung cancer surgery follows the pattern seen for bronchoscopies, with the decrease starting prior to lockdown. This was most noticeable for Māori. Te Aho o Te Kahu is looking into this further.
- For the year to date there has been a 15% increase in prostate cancer surgeries compared to 2019.

Chemotherapy and radiotherapy

- Overall, for the year to date the number of medical oncology FSAs and number of attendances for IV chemotherapy in 2020 is comparable to 2019. There has been an overall 17% increase in attendances for IV chemotherapy for Māori during the first six months of 2020 compared to the same time period in 2019
- Overall for the year to date the number of radiation oncology FSAs in 2020 is comparable to 2019.
- For the year to date there has been a 6% decrease in attendances for radiation therapy. This is similar for Māori (6%) and non-Māori/non-Pacific (7%). This may be the result of national hypofractionation guidance. Te Aho o Te Kahu is looking into this further using the Radiation Oncology Collection (ROC database), which allows for more detailed analysis.
- Overall, for the year to date there has been a 10% decrease in haematology first specialist appointments compared to the same time period in 2019. One contributor to this is likely to be a decrease in FSAs for non-malignant, non-urgent indications, deferred as part of the hospital response framework. These cases may have been managed in primary care.
- For the year to date there has been an 8% increase in IV chemotherapy for haematological malignancies compared to the same time period in 2019.

Introduction

Purpose of this report

This is the third report released by Te Aho o Te Kahu outlining the impact of COVID-19 on cancer services in New Zealand. This report looks at data through to the end of June 2020.

The report focuses on the aspects of the cancer care pathway for which we have readily available data and does not capture all aspects of the care. Critical aspects of cancer care, including access to primary care, radiology and palliative care are not measured in this report.

Data and analysis

The data in this report comes from Ministry of Health national data collections. Each section of the report includes information on where the data is from and any limitations with the data. Numbers in this report may not match the previous report exactly, due to late coding/submission of data.

It is important to note that the purpose of the analysis is to rapidly measure the impact of COVID-19 and the recovery on cancer services and does not consider pre-existing unmet need. The report also makes direct comparisons between 2020 and 2019 and does not consider any projected increase in diagnoses over time.

Key dates

Key dates in relation to COVID-19 that may be of use when reviewing the report include:

- 23 March: alert level 3 and hospital alert level framework released
- 26 March: alert level 4
- 28 April: alert level 3
- 14 May: alert level 2
- 9 June: alert level 1

Cancer Registrations

Notes on data

- The data come from laboratory reports to the New Zealand Cancer Register (NZCR). This means that cancers diagnosed without haematology or pathology (e.g. radiology alone) will not be counted in this analysis.
- ‘Date’ is date of diagnosis on the NZCR – usually the date the specimen was taken from the person and sent to the laboratory. Analyses include all new provisional and registered cancer events based on pathology and haematology reports. Data were extracted from NZCR on 29 July 2020.
- Further information on this data is included in Appendix 1.

Results

Table 1 shows the change in cancer registrations in 2020 compared to 2019 by month, and the cumulative impact this has had on cancer registrations for the year to date (up until the end of June 2020). For each ethnic group except Māori the number of new registrations in June 2020 exceeded the number reported in June 2019.

Table 1: Absolute number and percentage change in cancer registrations in 2020 compared to 2019 by month, and cumulative year to date

	April 2020		May 2020		June 2020		Year to date	
	Number	%	Number	%	Number	%	Number	%
Māori	-71	-28.9	-30	-11.6	-28	-10.7	-74	-5.1
Pacific	-20	-23.3	-36	-29.8	21	26.9	-14	-2.5
Asian	-37	-30.6	-20	-13.1	18	13.5	56	7.5
European/Other	-848	-41.2	-403	-17.1	216	11.1	-660	-5.3
Total Population	-976	-38.8	-492	-17	225	9.2	-689	-4.5

Note: a small number of reports have ‘unspecified’ ethnicity, meaning the sum of all ethnic groups may not equal the total population.

Figure 1: Total number of cancer registrations by month and year (left), cumulative number of cancer registrations by month and year (right)

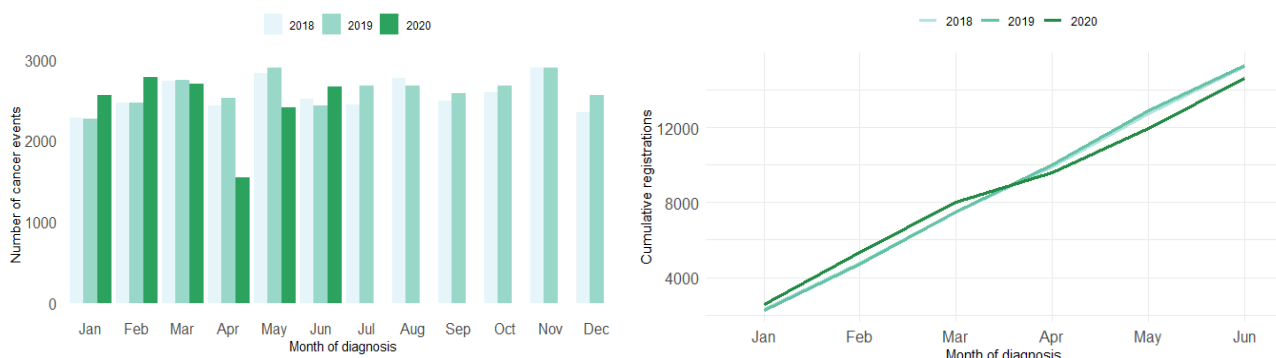


Figure 2: Number of cancer registrations by month and year, by ethnicity

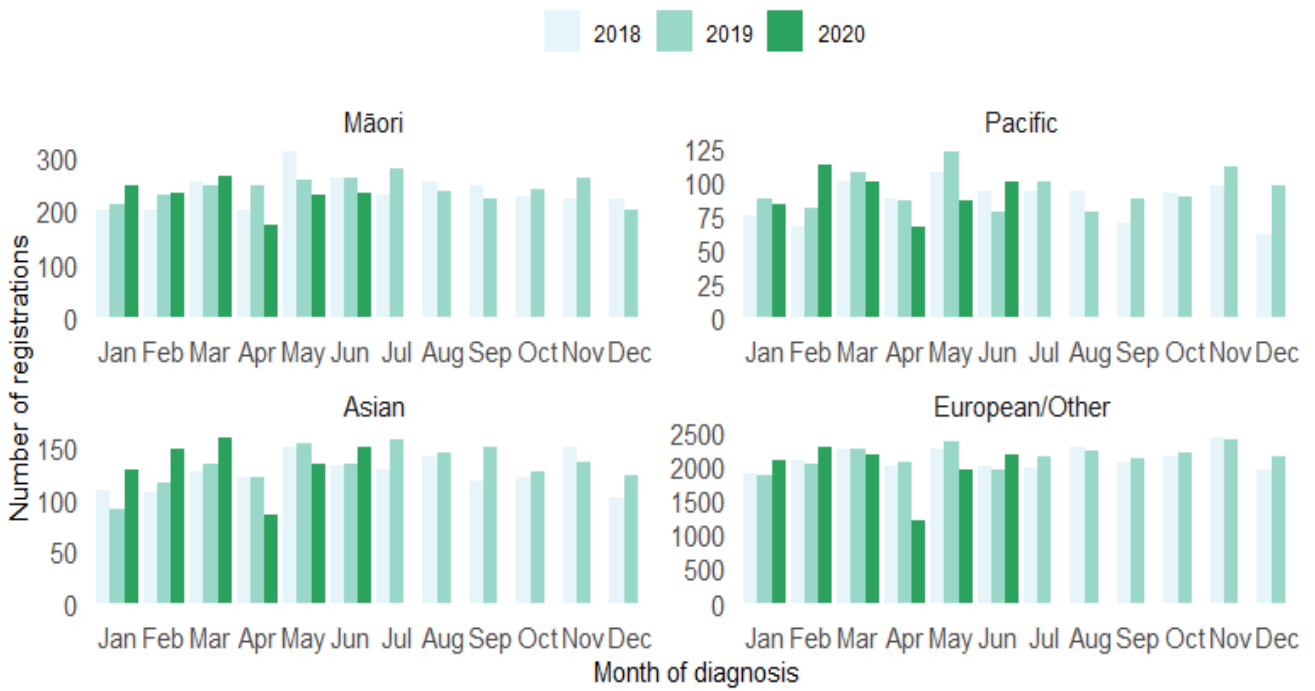


Figure 3: Cumulative number of cancer registrations by year, by ethnicity

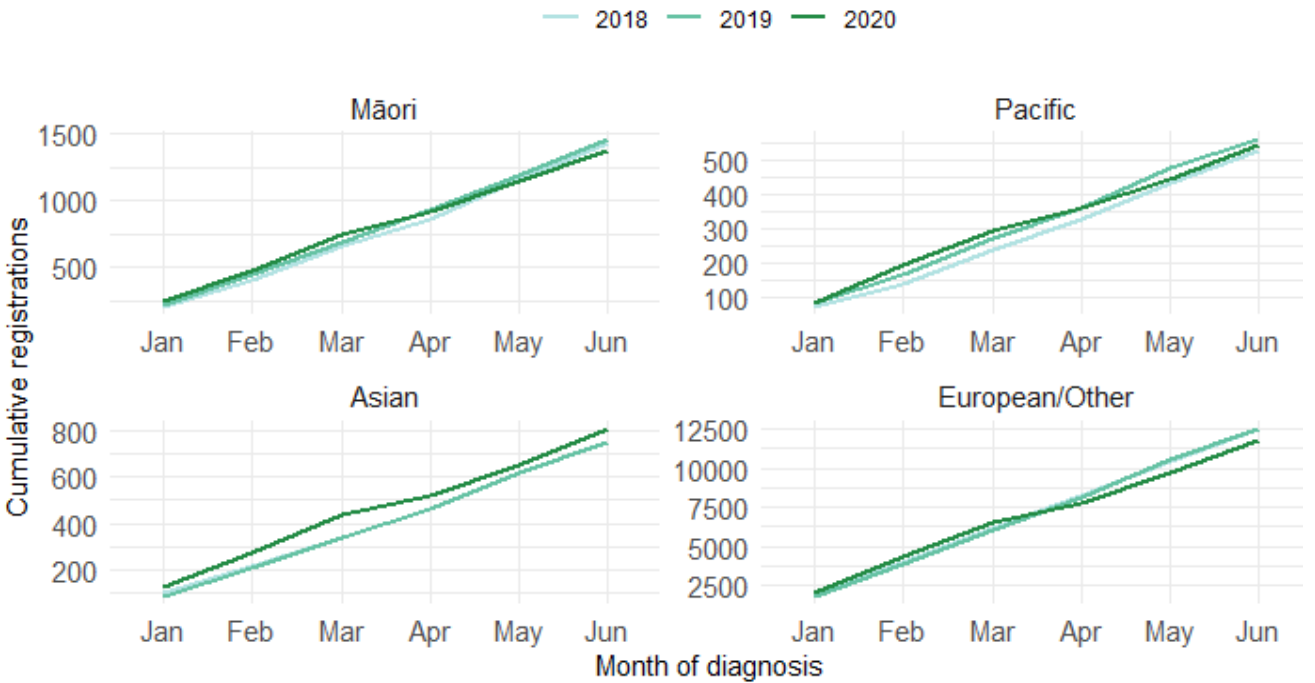


Table 2: Changes in cancer registration in 2020 compared to 2019 by month and for the year to date, absolute difference in number of cases and percentage change, by cancer group.

Cancer Group	April 2020		May 2020		June 2020		Year to date	
	Number	%	Number	%	Number	%	Number	%
Breast	-205	-56.8	-133	-33.2	-19	-5.2	-243	-11.7
Cervix	-85	-47.2	-46	-24.1	19	11.2	75	7.9
Colorectal	-91	-34.9	-14	-4.7	-10	-3.7	-29	-1.8
Gynaecology	-3	-3.8	-18	-16.2	21	22.8	29	5.1
Haematology and lymphoid	-82	-40.4	-69	-29.5	9	4.8	-129	-10.7
Melanoma and non-melanoma skin	-312	-53.8	-280	-40.6	45	8.7	-386	-10.5
Other digestive system	-33	-24.4	-9	-6	41	38.3	22	2.9
Prostate	-148	-51	35	10.1	-22	-6.5	-233	-12.2
Respiratory and thorax	-24	-16.6	-9	-6	3	2.5	-35	-4
Urinary system	3	2.7	7	5.7	12	10.3	14	1.9

Figure 4: Number of cancer registrations by month and year, by cancer group



Figure 5: Cumulative number of cancer registrations by year, by cancer group

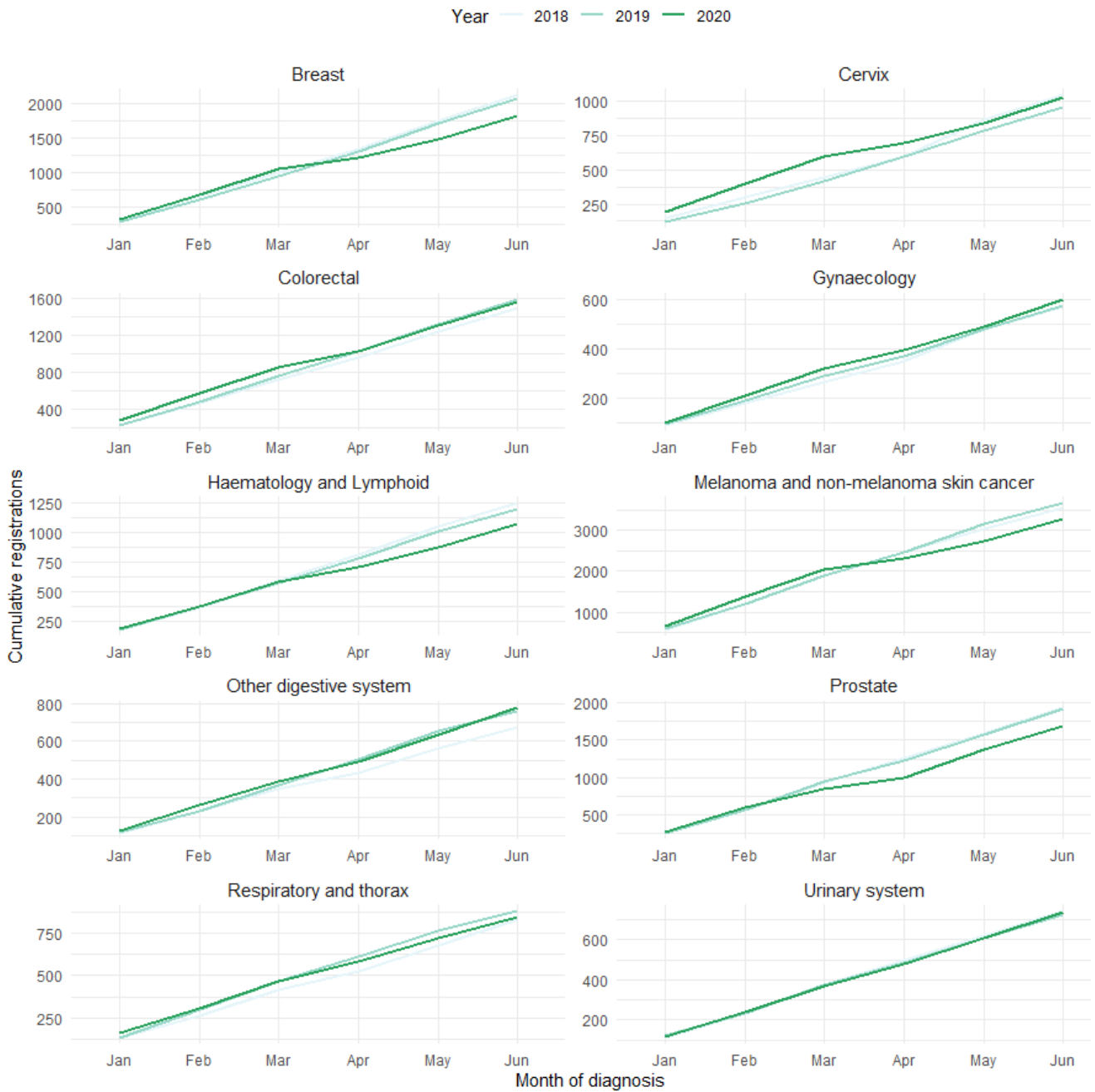


Table 3: Changes in cancer registration in 2020 compared to 2019 by month and for the year to date, absolute difference in number of cases and percentage change, by DHB of domicile (See Appendix 2 for graphs)

DHB	April 2020		May 2020		June 2020		Year to date	
	Number	%	Number	%	Number	%	Number	%
Northland	-20	-19	-13	-10.1	4	3.9	-7	-1
Waitemata	-133	-40.9	-101	-25.6	106	40.5	-50	-2.6
Auckland	-74	-38.1	-56	-20.5	39	16.9	-71	-5.1
Counties Manukau	-81	-37.7	-31	-12.2	36	17.5	-9	-0.7
Waikato	-85	-38.1	-32	-13.3	25	13.1	-105	-7.7
Bay of Plenty	-34	-23.3	-40	-24.7	-16	-10.3	-65	-7.1
Tairāwhiti	-22	-61.1	-12	-38.7	8	32	-25	-14.7
Lakes	-29	-46	-16	-21.9	-2	-3.4	-20	-5.4
Taranaki	-30	-37.5	-45	-40.2	-8	-9.8	1	0.2
Hawke's Bay	-37	-41.1	-6	-5.9	-12	-11.3	-62	-10.5
Whanganui	-19	-39.6	-7	-13.7	6	14.3	1	0.3
MidCentral	-34	-34	3	2.8	5	4.8	52	8.7
Capital & Coast	-65	-44.5	-11	-7.1	-2	-1.6	-54	-6.6
Hutt Valley	-17	-26.6	-20	-23.5	-8	-9.5	-15	-3.3
Wairarapa	-5	-20.8	4	16.7	7	30.4	9	5.8
Nelson Marlborough	-44	-41.5	-28	-25.5	2	1.9	-42	-6.8
West Coast	-9	-40.9	-14	-43.8	11	73.3	-17	-13.7
Canterbury	-89	-32.7	-28	-9.3	-31	-10.4	-73	-4.4
South Canterbury	-15	-38.5	-6	-17.6	8	23.5	-4	-1.9
Southern	-138	-63	-37	-16.2	45	24.6	-154	-12.7

Key points

- Overall for the year to date (up until end of June 2020), there have been 689 fewer cancer registrations compared to the same time period in 2019, a 4.5% decrease.
- There were 225 more cancers registered in June 2020 compared to June 2019, a 9.2% increase. Māori were the only ethnic group where there remained a decrease in the monthly number of registrations in June 2020 compared to 2019.
- The decrease in cancer registrations for the year to date was relatively similar across all ethnic groups. Over the year to date there was a 5% decrease in registrations for Māori, 2.5% decrease for Pacific and a 5.3% decrease for European/other. There was an increase in registrations for people in the Asian ethnic group.
- The overall impact of COVID-19 on registrations for the year to date has been most marked for haematology/lymphoid, melanoma and non-melanoma skin cancer, prostate and breast cancers (all have seen a 10-12% decrease for the year to date).

Gastrointestinal endoscopy

Notes on data

- Gastrointestinal endoscopy data were extracted from National Non-admitted Patient Collection (outpatient) and National Minimum Dataset (inpatient) on 27 July 2020.
- Includes colonoscopies and gastroscopies for all indications (i.e. not just cancer).
- Technical information: Gastroscopies (Purchase Unit Code - MS02005), Colonoscopies (Purchase Unit Code - MS02007), Combined Gastroscopies + Colonoscopies (Purchase Unit Code - MS02014).

Results

Table 4: Absolute number and percentage change in colonoscopy and gastroscopy in 2020 compared to 2019 by month, and cumulative year to date

	April 2020		May 2020		June 2020		Year to date	
	Number	%	Number	%	Number	%	Number	%
Māori	-354	-68%	-79	-13%	143	23%	-171	-5%
Pacific Peoples	-124	-60%	13	5%	89	40%	146	12%
Non-Māori/Non-Pacific	-4323	-78%	-1246	-19%	1115	19%	-4118	-12%
Total Population	-4801	-77%	-1312	-18%	1347	20%	-4143	-11%

Figure 6: Number of gastrointestinal endoscopy procedures by month and year, for the total population (left) and for Māori (right)

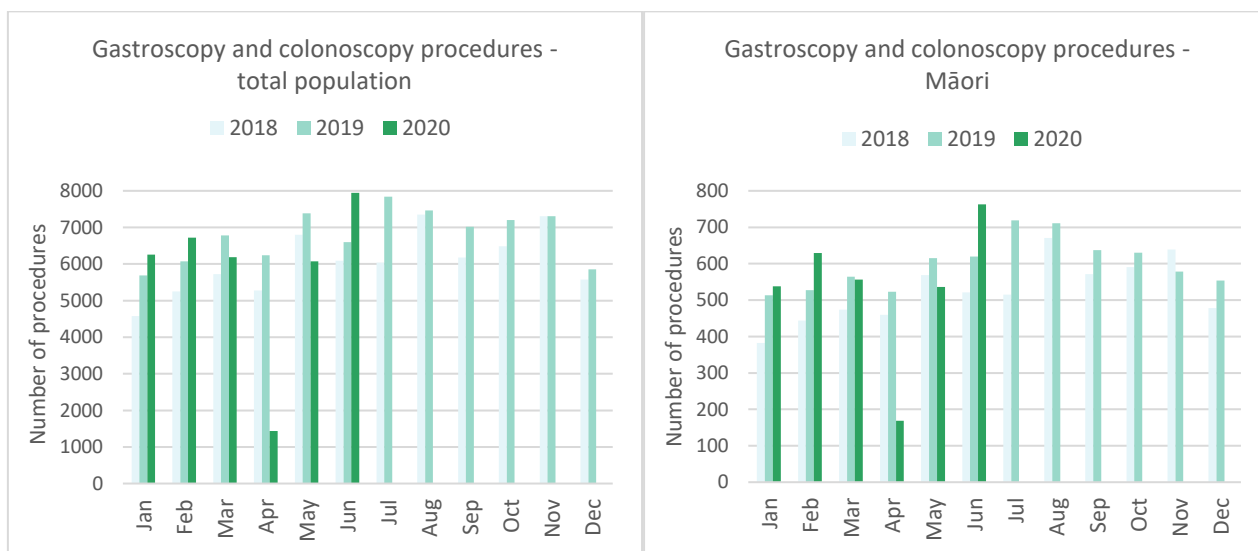
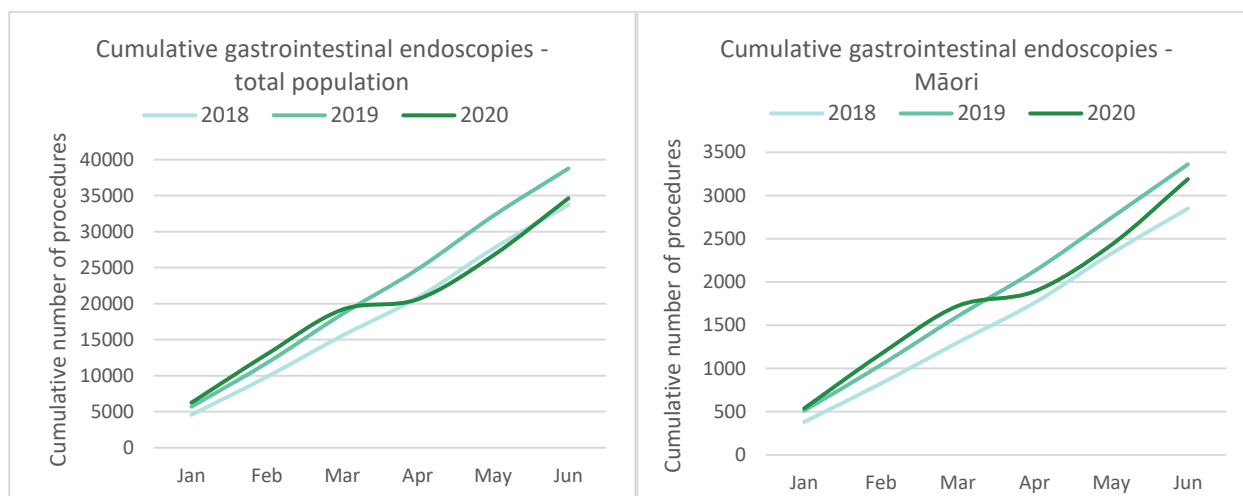


Figure 7: Cumulative number of gastrointestinal endoscopy procedures by year, for the total population (left) and for Māori (right)



Key points

- Gastrointestinal endoscopy services increased substantially in June 2020, with a 20% increase in endoscopies performed in June 2020 compared to June 2019.
- Overall, for the year to date there have been 11% fewer gastrointestinal endoscopies performed in 2020 compared to 2019, with Māori having a smaller cumulative reduction (5%) compared to non-Māori/non-Pacific (12%). There has been a 12% increase in gastrointestinal endoscopies for Pacific Peoples compared to the same time period in 2019.
- Despite the 11% year to date decrease in colonoscopies, there has only been a 1.8% decrease in registrations of colorectal cancer (see Table 2). This indicates that triage systems are operating well within DHBs, with those at highest risk being prioritised to receive their colonoscopies.
- There has been significant work by DHBs to increase the delivery of endoscopies post lockdown. There is ongoing work nationally to address the demand for colonoscopy services.

Bronchoscopy

Notes on data

- Bronchoscopy data were extracted from National Non-admitted Patient Collection (outpatient) and National Minimum Dataset (inpatient) on the 27 July 2020.
- Includes bronchoscopies for any indication (i.e. not just cancer).
- Technical information: Bronchoscopies (Purchase Unit Code - MS02003).

Results

Table 5: Absolute number and percentage change in bronchoscopies in 2020 compared to 2019 by month, and cumulative year to date

	April 2020		May 2020		June 2020		Year to date	
	Number	%	Number	%	Number	%	Number	%
Māori	-25	-83%	-19	-43%	0	0%	-69	-32%
Pacific Peoples*	-		-		-		3	5%
Non-Māori / Non-Pacific	-144	-74%	-79	-34%	34	25%	-234	-22%
Total Population	-175	-74%	-91	-33%	33	19%	-300	-22%

*Due to small numbers, monthly figures have not been included for Pacific Peoples

Figure 8: Number of bronchoscopies by month and year, for the total population (left) and for Māori (right)

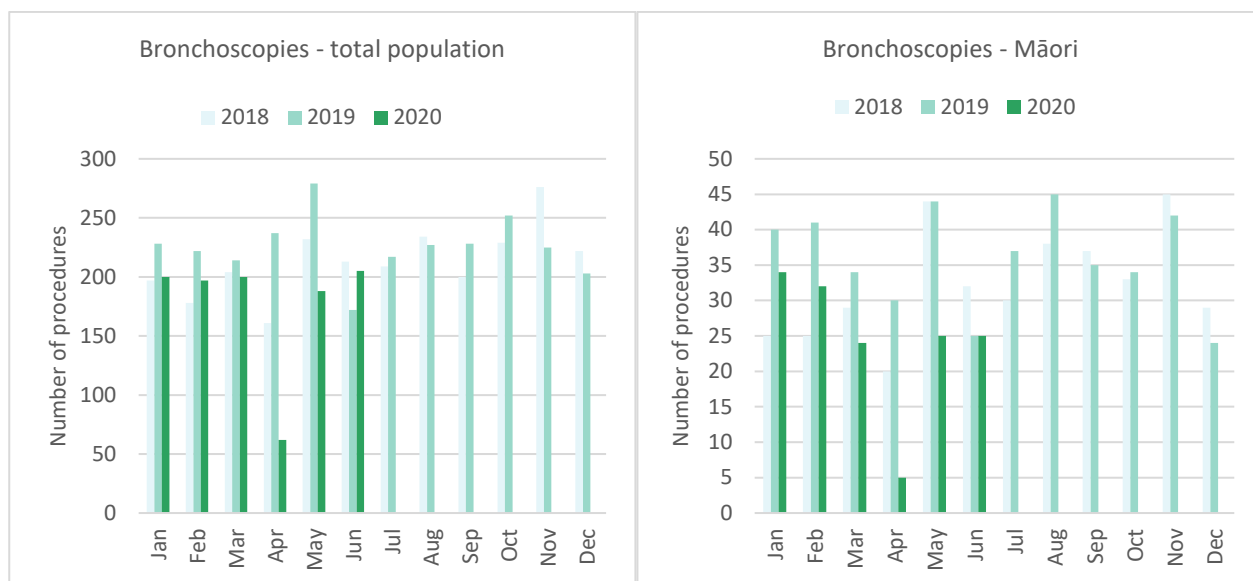
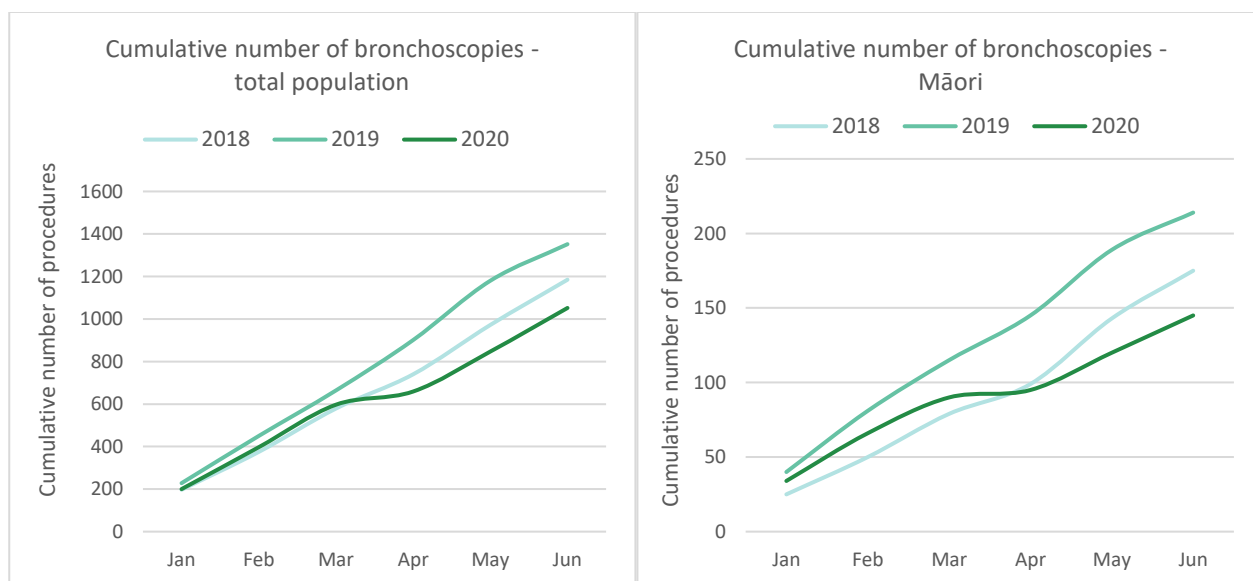


Figure 9: Cumulative number of bronchoscopies procedures by year, for the total population (left) and for Māori (right)



Key points

- Bronchoscopy services have increased in June 2020 compared to May 2020. There was an increase in bronchoscopies performed in June 2020 compared to June 2019.
- However, there remains a deficit between the number of bronchoscopies performed in 2020 compared to 2019. Overall there were 22% fewer bronchoscopies performed in the first six months of 2020 compared to the first six months of 2019.
- Māori were disproportionately impacted by the cumulative decrease in bronchoscopies (32% decrease for Māori compared to 22% decrease for non-Māori/non-Pacific). This appears to have started prior to the lockdown, with fewer bronchoscopies from February 2020.
- Te Aho o Te Kahu is investigating the cause of variance in bronchoscopies in 2020.

Combined curative cancer surgery

Notes on data

- This report includes data on curative surgery for colorectal, lung and prostate cancer. These cancers were chosen because a pre-validated list of surgical procedure codes for these cancers already existed within Te Aho o Te Kahu, agreed on as part of the quality performance indicator work programme. These three cancers are therefore used as case studies for cancer surgery more generally. The procedure codes are included in Appendix 4.
- The data was extracted from the National Minimum Dataset on 27 July 2020.

Results

Table 6: Absolute number and percentage change in curative surgery (colorectal, lung and prostate) in 2020 compared to 2019 by month, and cumulative year to date

	April 2020		May 2020		June 2020		Year to date	
	Number	%	Number	%	Number	%	Number	%
Māori	-6	-15%	2	6%	23	92%	34	18%
Pacific Peoples*	-		-		-		-15	-26%
Non-Māori / Non-Pacific	-87	-27%	9	3%	5	2%	-63	-4%
Total Population	-103	-27%	3	1%	24	8%	-44	-2%

*Due to small numbers, monthly figures have not been included for Pacific Peoples

Figure 10: Number of curative cancer surgeries (prostate, colorectal, lung) by month and year, for the total population (left) and for Māori (right)

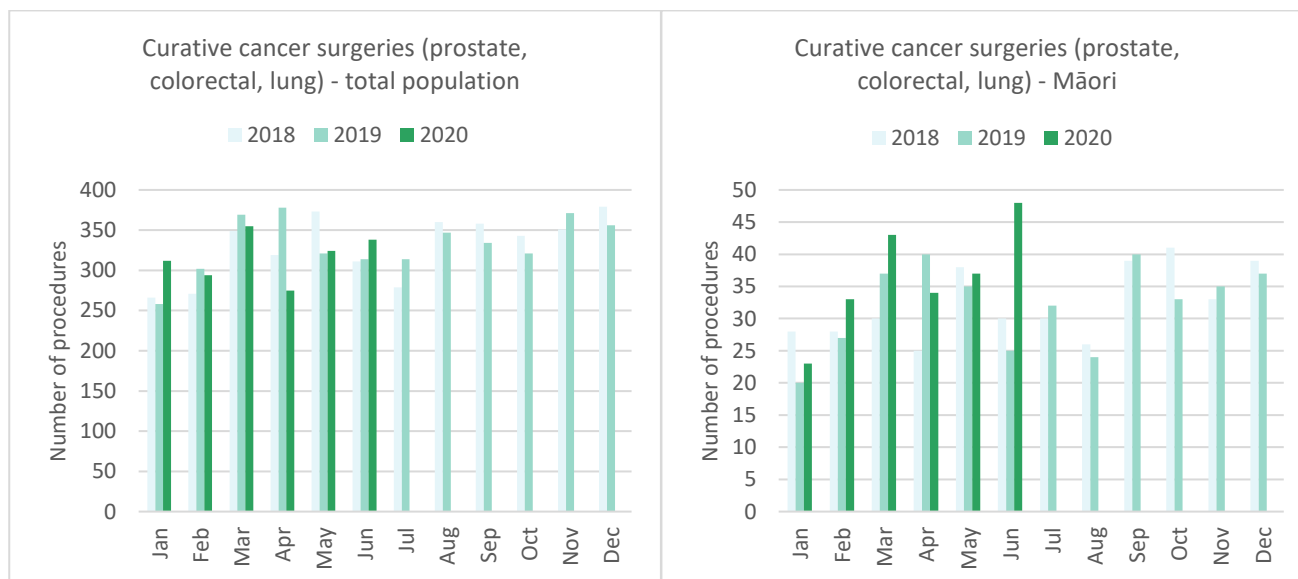
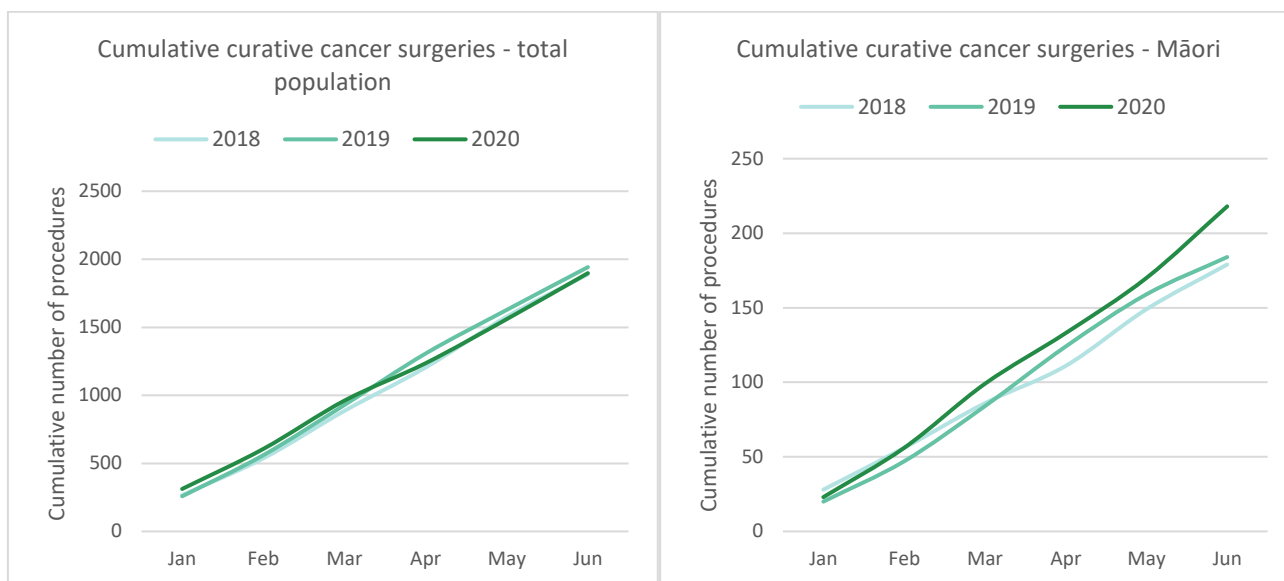


Figure 11: Cumulative number of curative cancer surgeries (colorectal, lung, prostate) by year, for the total population (left) and for Māori (right)



Key points

- Overall, the impact of COVID-19 on cancer surgery volumes has been minimal, with 2% fewer surgeries performed in the first six months of 2020 compared to the first six months of 2019. There has been an 18% increase in surgery for Māori in 2020 compared to 2019.
- As noted in the previous reports, the decrease in surgery seen over the lockdown period appeared to be largely driven by the decrease in diagnostic services.

Colorectal cancer surgery

Notes on data

- A list of the surgical procedure codes used for analysis are included in Appendix 4.
- The data was extracted from the National Minimum Dataset on 27 July 2020.

Results

Table 7: Absolute number and percentage change in curative colorectal cancer surgery in 2020 compared to 2019 by month, and cumulative year to date

	April 2020		May 2020		June 2020		Year to date	
	Number	%	Number	%	Number	%	Number	%
Māori	-1	-4%	6	40%	12	92%	42	45%
Pacific Peoples	-	-	-	-	-	-	-11	-31%
Non-Māori / Non-Pacific	-77	-34%	-31	-17%	-11	-6%	-109	-10%
Total Population	-87	-33%	-29	-14%	-3	-2%	-78	-6%

*Due to small numbers, monthly figures have not been included for Pacific Peoples

Figure 12: Number of curative colorectal cancer surgeries by month and year, for the total population (left) and for Māori (right)

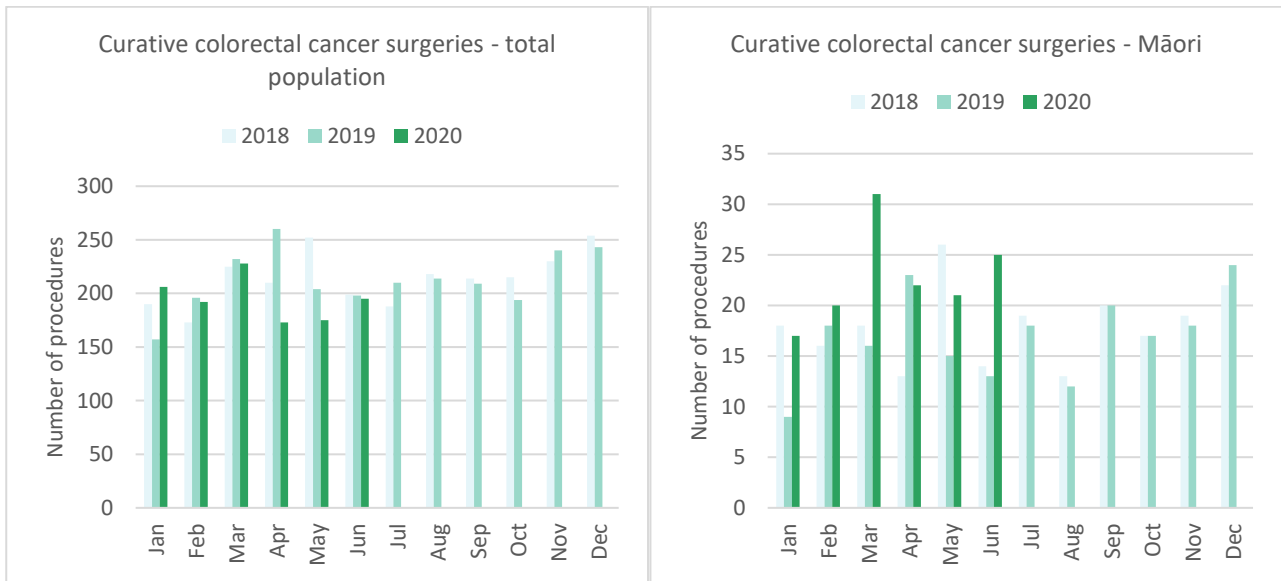
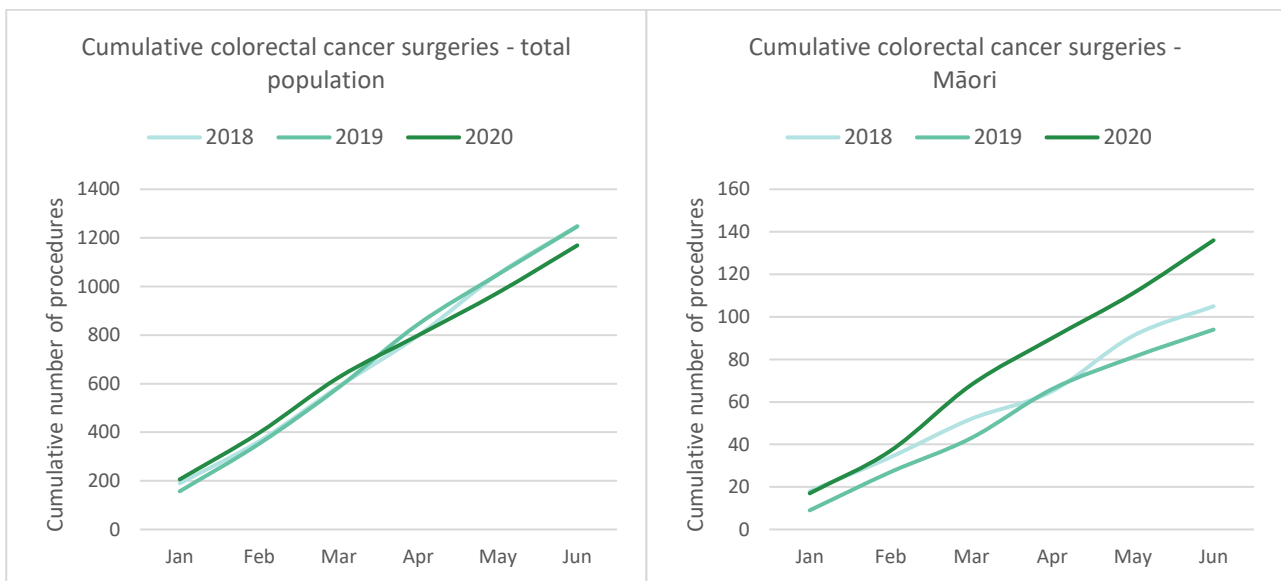


Figure 13: Cumulative number of curative colorectal cancer surgeries by year, for the total population (left) and for Māori (right)



Key points

- Colorectal cancer surgery returned to pre-COVID volumes in June.
- Overall there has been a 6% decrease in colorectal surgery for the year to date compared to the first six months of 2020. This is likely to be largely driven by the decline in diagnostic colonoscopies performed during lockdown.
- Overall, there has been a 45% increase in curative colorectal cancer surgery for Māori for the year to date compared to the same time period in 2019.

Lung cancer surgery

Notes on data

- A list of the surgical procedure codes used for analysis are included in Appendix 4.
- The data were extracted from the National Minimum Dataset on 27 July 2020.
- The number of lung cancer surgeries performed each month is relatively small, so caution is needed when comparing data by month.

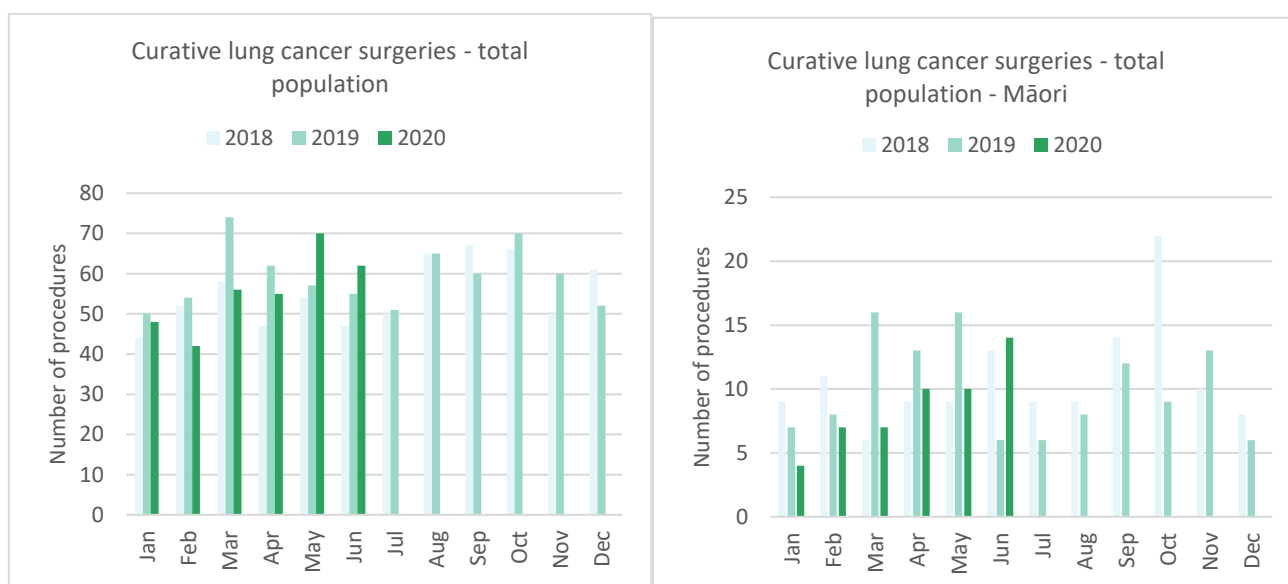
Results

Table 8: Absolute number and percentage change in curative lung cancer surgery in 2020 compared to 2019 by month, and cumulative year to date.

	April 2020		May 2020		June 2020		Year to date	
	Number	%	Number	%	Number	%	Number	%
Total Population	-7	-11%	13	23%	7	13%	-19	-5%

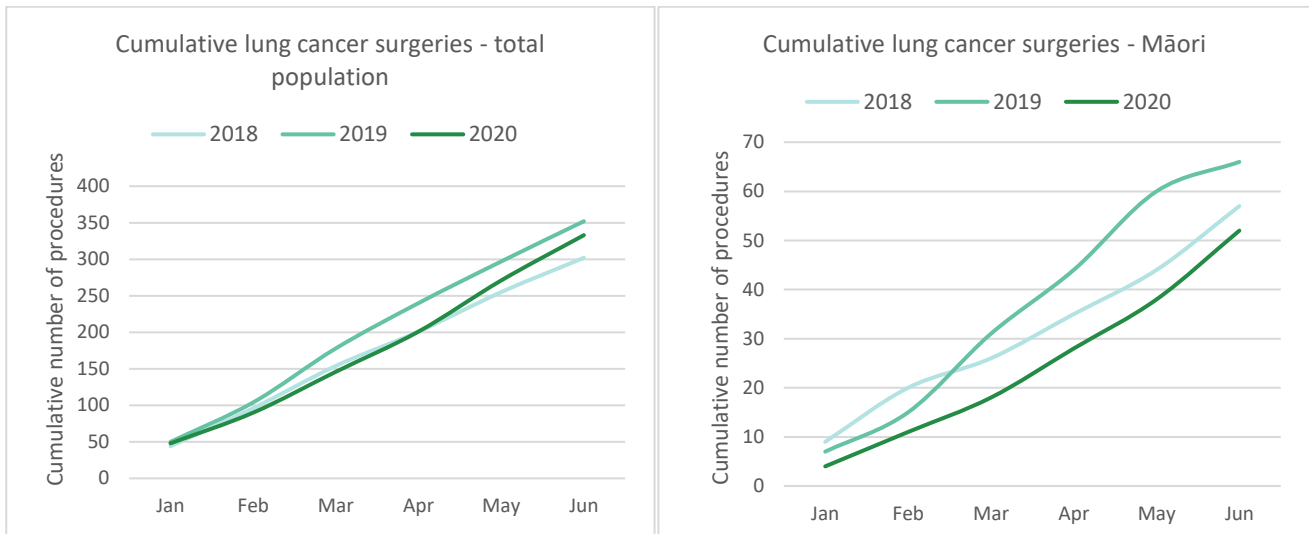
*Due to the small number of surgeries performed each month calculations have only been included for the total population rather than by ethnicity

Figure 14: Number of curative lung cancer surgeries by month and year, total population (left) and for Māori (right)



*Due to the small number of surgeries performed each month it is not possible to draw conclusions from small changes between months.

Figure 15: Cumulative number of curative lung cancer surgeries by year, for the total population (left) and for Māori (right)



Key points

- There was an increase in curative lung cancer surgery in June 2020 compared to June 2019.
- Overall, for the year to date there has been a 5% decrease in curative lung cancer surgeries compared to 2019. This deficit is smaller than the gap seen at the end of May 2020 (9%).
- The decrease in lung cancer surgery follows the pattern seen for bronchoscopies, with the decrease starting prior to lockdown. Te Aho o Te Kahu is looking into this further.
- The early decrease in lung cancer surgery is most noticeable for Māori, with fewer curative surgeries performed since the beginning of 2020, noting that the numbers are relatively small.

Prostate cancer surgery

Notes on data

- A list of the surgical procedure codes used for analysis are included in Appendix 4.
- The data was extracted from the National Minimum Dataset on 27 July 2020.
- The number of prostate cancer surgeries performed each month is relatively small, so caution is needed when comparing data by month.

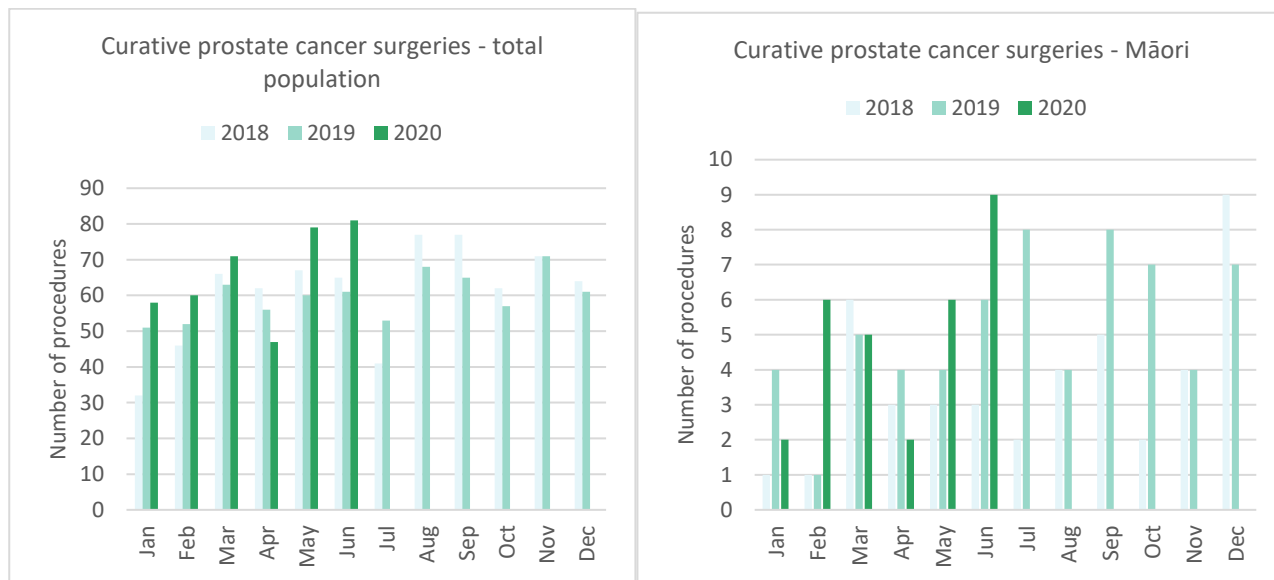
Results

Table 9: Absolute number and percentage change in curative prostate cancer surgery in 2020 compared to 2019 by month, and cumulative year to date

	April 2020		May 2020		June 2020		Year to date	
	Number	%	Number	%	Number	%	Number	%
Total Population	-9	-16%	19	32%	20	33%	53	15%

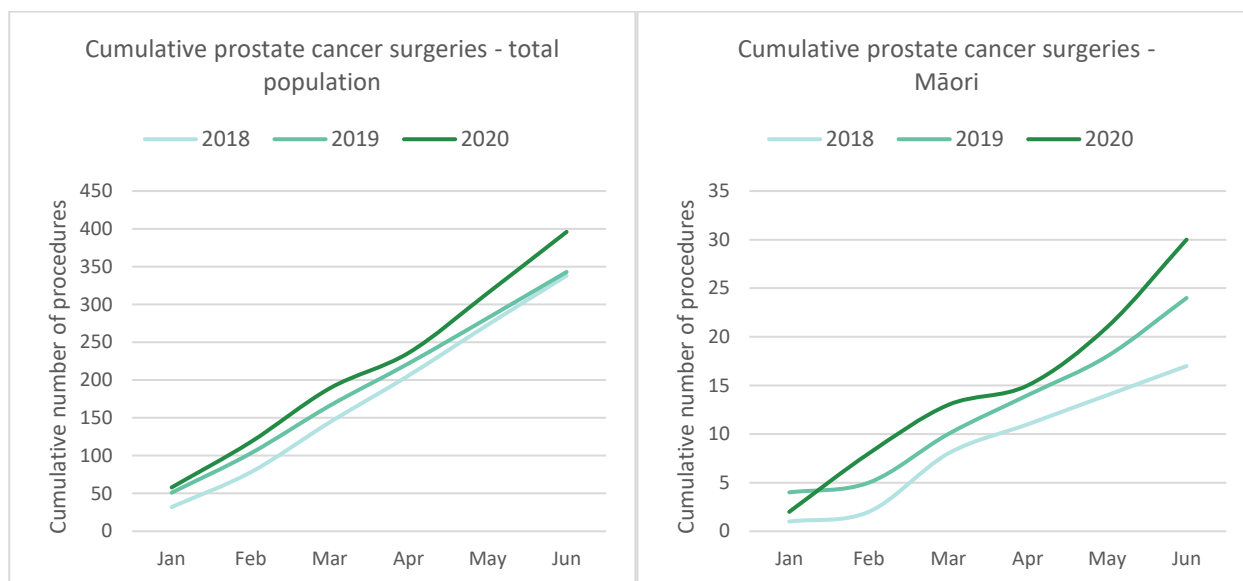
*Due to the small number of surgeries performed each month calculations have only been included for the total population

Figure 16: Number of curative prostate cancer surgeries by month and year, total population (left) and for Māori (right)



*Due to the small number of surgeries performed each month it is not possible to draw conclusions from small changes between months.

Figure 17: Cumulative number of curative prostate cancer surgeries by year, for the total population (left) and for Māori (right)



Key points

- For the year to date there has been a 15% increase in prostate cancer surgeries compared to 2019. There was an increase in prostate cancer surgeries performed in June 2020 compared to June 2019.

Medical oncology

Notes on data

- Extracted from National non-admitted patient collection (Outpatient collection) on 27 July 2020.
- First specialist assessment (FSA) reflects counts of first attendance for specialist medical oncology assessment.
- IV chemotherapy reflects appointments for outpatient and inpatient IV chemotherapy for non-haematological indications.
- Technical information: medical oncology FSA (PUC M50020), and IV chemotherapy (PUC MS02009)

Results

Table 10: Absolute number and percentage change in medical oncology first specialist assessments in 2020 compared to 2019 by month, and cumulative year to date

	April 2020		May 2020		June 2020		Year to date	
	Number	%	Number	%	Number	%	Number	%
Māori	-15	-15%	-1	-1%	12	12%	-3	0%
Pacific Peoples	12	43%	-7	-14%	-6	-17%	40	20%
Non-Māori / Non-Pacific	87	15%	-60	-8%	54	9%	122	3%
Total Population	84	12%	-68	-8%	60	8%	159	4%

Figure 18: Number of medical oncology first specialist assessments by month and year, for the total population (left) and for Māori (right)

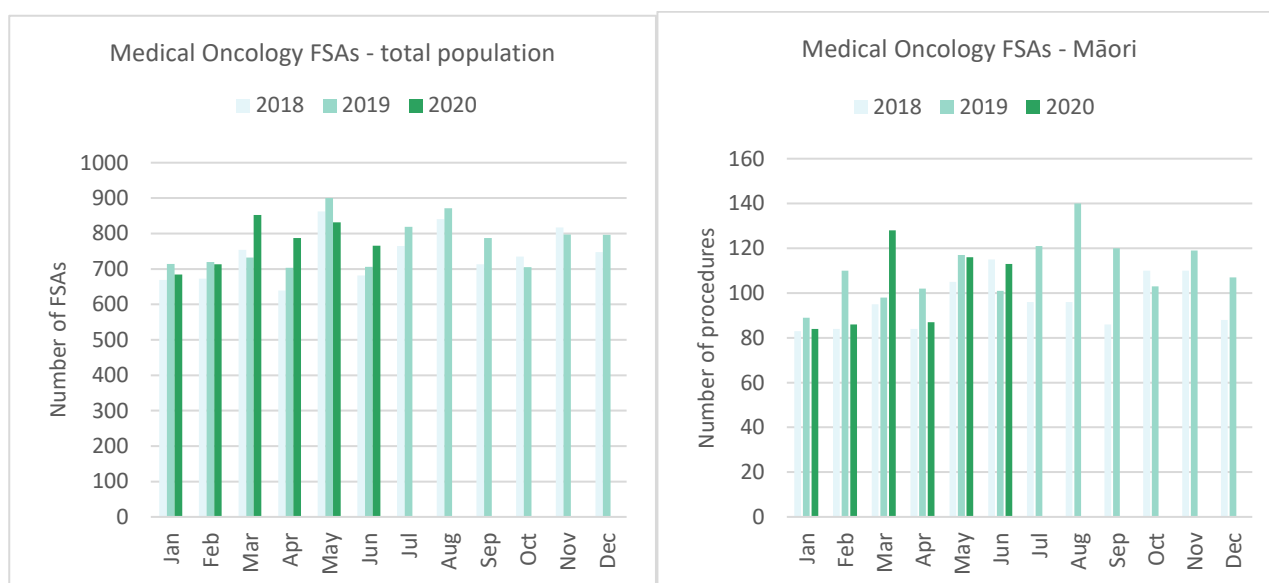


Figure 19: Cumulative number of medical oncology first specialist assessments by year, for the total population (left) and for Māori (right)

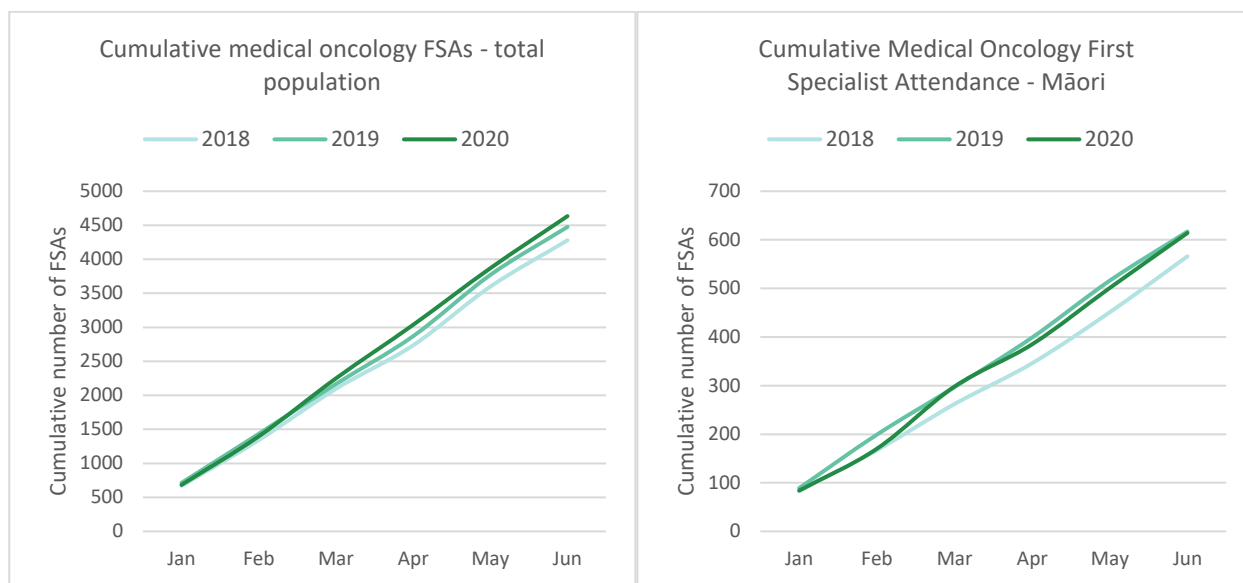


Table 11: Absolute number and percentage change in IV chemotherapy attendances in 2020 compared to 2019 by month, and cumulative year to date

	April 2020		May 2020		June 2020		Year to date	
	Number	%	Number	%	Number	%	Number	%
Māori	118	17%	42	5%	221	33%	735	17%
Pacific Peoples	4	1%	-11	-3%	57	22%	45	3%
Non-Māori / Non-Pacific	-335	-7%	-582	-11%	560	12%	429	1%
Total Population	-213	-4%	-551	-8%	838	15%	1209	3%

Figure 20: Number of attendances for IV chemotherapy by month and year, for the total population (left) and for Māori (right)

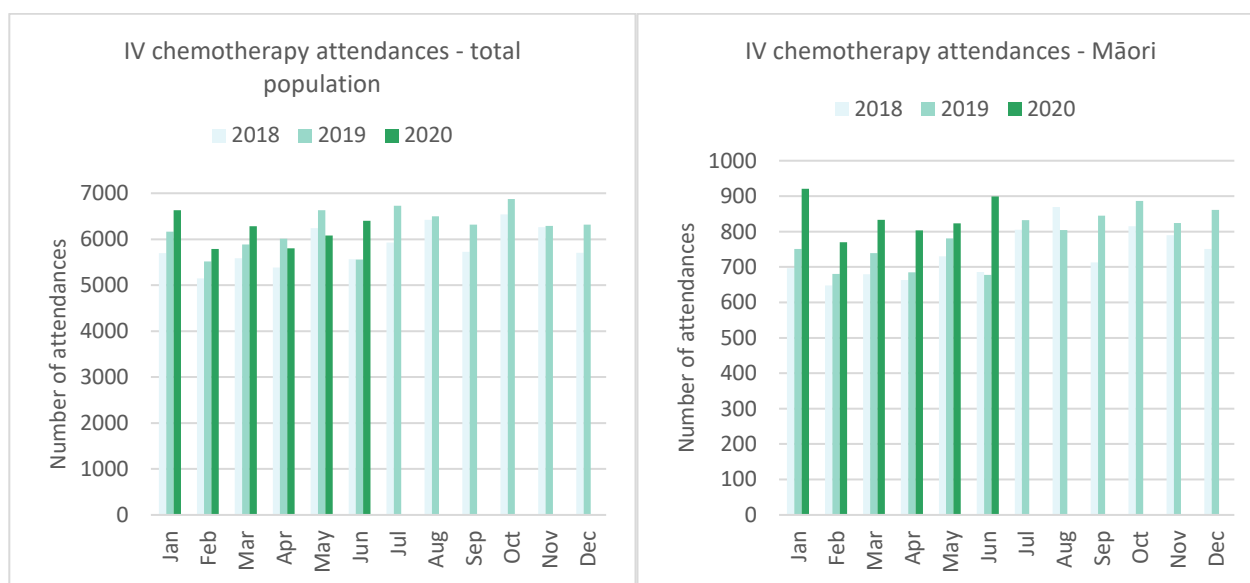
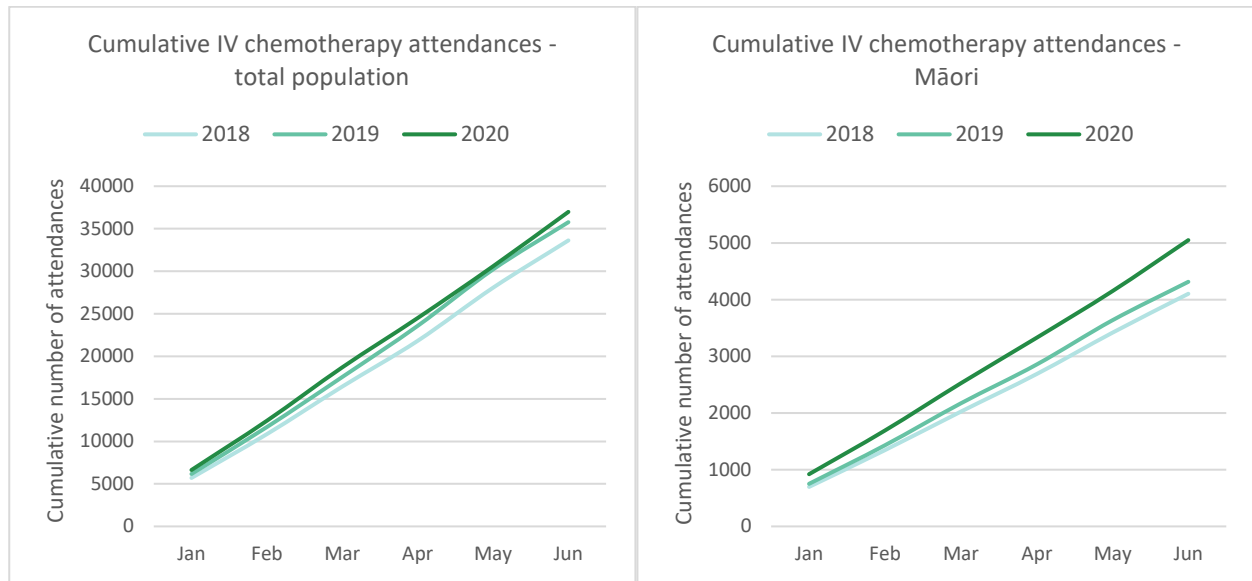


Figure 21: Cumulative number of attendances for IV chemotherapy by year, for the total population (left) and for Māori (right)



Key points

- Overall, for the year to date the number of medical oncology FSAs and number of attendances for IV chemotherapy in 2020 is comparable to 2019.
- There has been an overall 17% increase in attendances for IV chemotherapy for Māori during the first six months of 2020 compared to the same time period in 2019.

Radiation oncology

Notes on data

- Extracted from National Non-admitted patient collection on 27 July 2020.
- First specialist assessment (FSA) reflects counts of first attendance for radiation oncology specialist assessment.
- Megavoltage attendance reflects appointments for planning/simulation and for treatment with radiation therapy on a linear accelerator.
- Technical information: radiation oncology FSA (PUC M50022), megavoltage attendances (Purchase Unit Code M50025)

Results

Table 12: Absolute number and percentage change in radiation oncology first specialist assessments in 2020 compared to 2019 by month, and cumulative year to date

	April 2020		May 2020		June 2020		Year to date	
	Number	%	Number	%	Number	%	Number	%
Māori	12	10%	7	5%	22	20%	62	9%
Pacific Peoples	14	47%	-15	-29%	-16	-36%	-19	-7%
Non-Māori / Non-Pacific	46	6%	-103	-11%	79	10%	148	3%
Total Population	72	8%	-111	-10%	85	9%	191	3%

Figure 22: Number of radiation oncology first specialist assessments by month and year, total population (left) and for Māori (right)

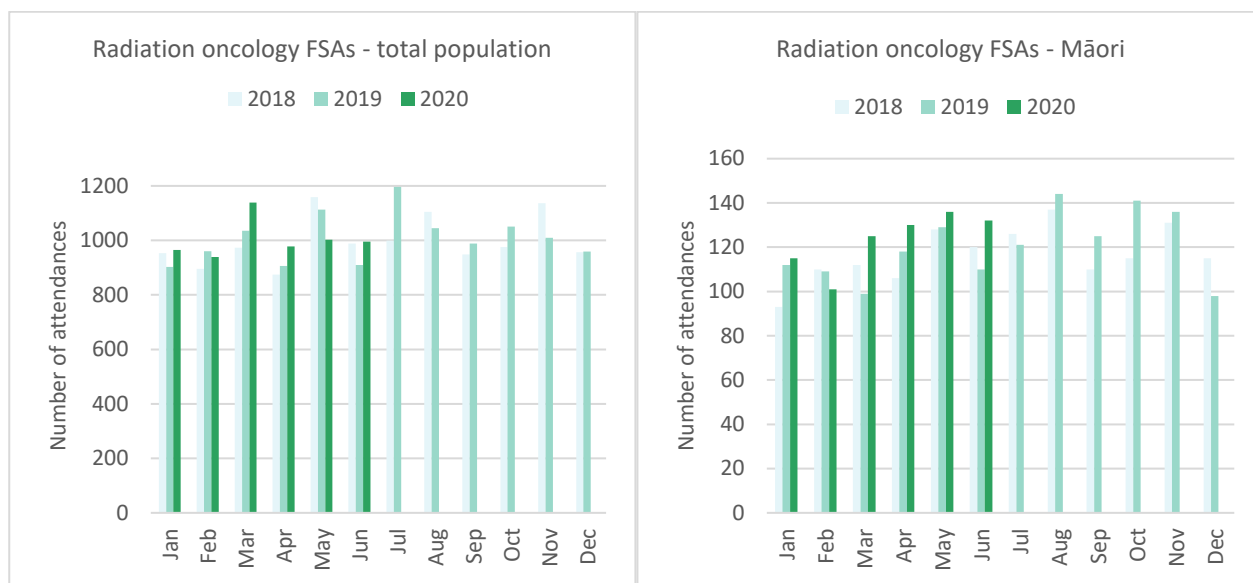


Figure 23: Cumulative number of radiation oncology first specialist assessments by month and year, total population (left) and for Māori (right)

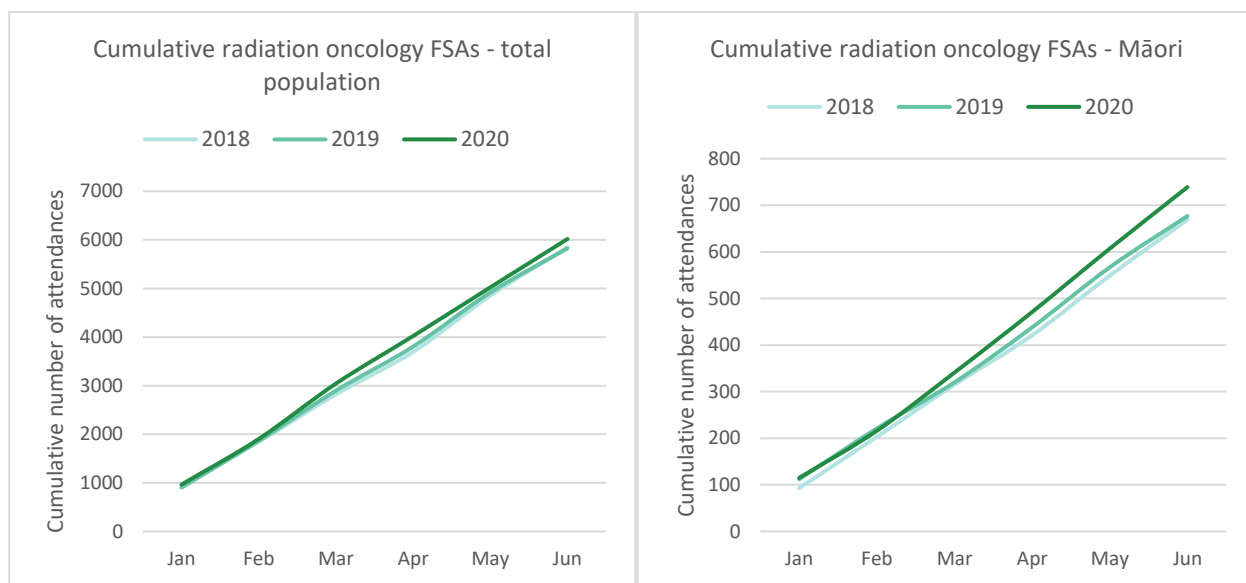


Table 13: Absolute number and percentage change in radiation therapy attendances in 2020 compared to 2019 by month, and cumulative year to date

	April 2020		May 2020		June 2020		Year to date	
	Number	%	Number	%	Number	%	Number	%
Māori	-360	-22%	-374	-20%	274	17%	-550	-6%
Pacific Peoples	32	7%	-172	-28%	-3	-1%	259	9%
Non-Māori / Non-Pacific	-1771	-17%	-3076	-25%	555	5%	-4636	-7%
Total Population	-2099	-17%	-3622	-25%	826	7%	-4927	-6%

Figure 24: Number of attendances for radiation therapy by month and year, total population (left) and for Māori (right)

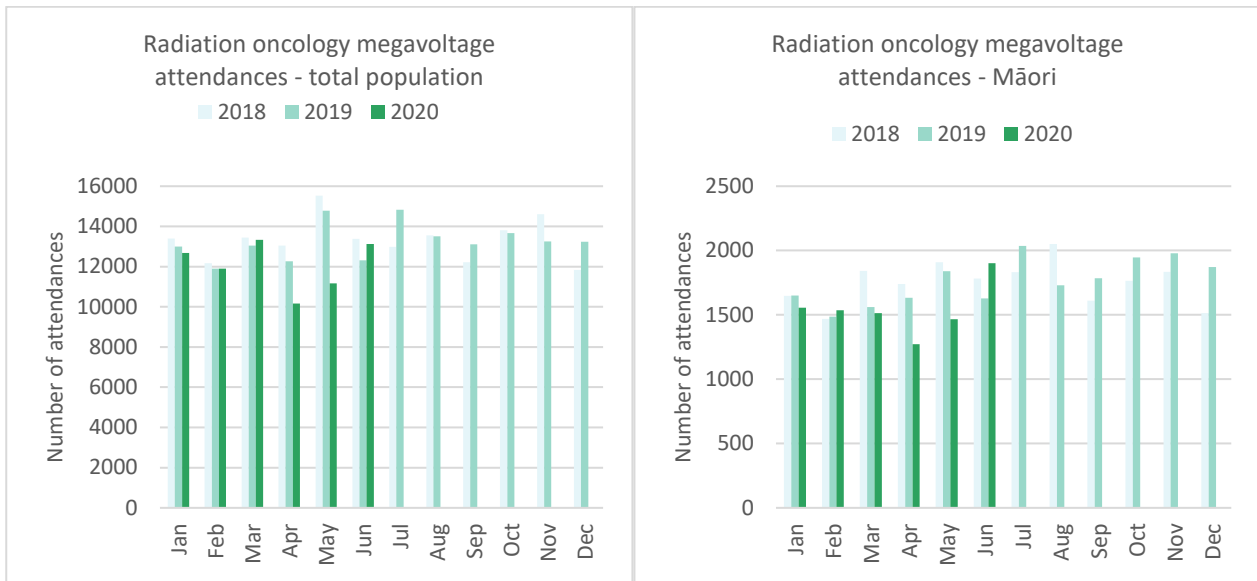
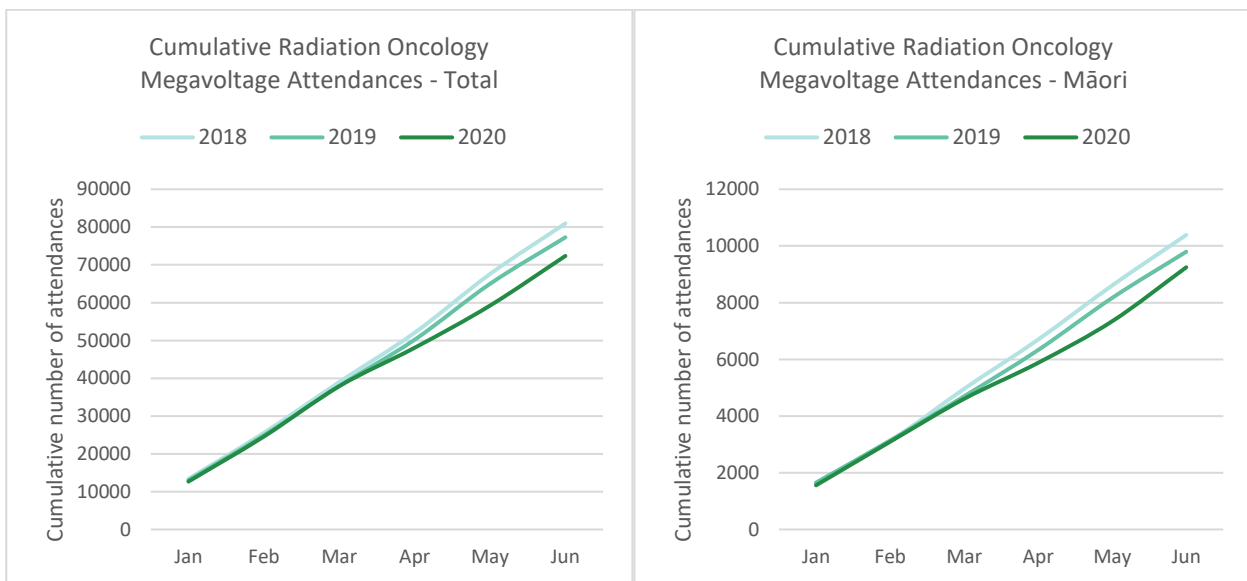


Figure 25: Cumulative number of attendances for radiation therapy by month and year, total population (left) and for Māori (right)



Key points

- Overall for the year to date the number of radiation oncology FSAs in 2020 is comparable to 2019.
- For the year to date there has been a 6% decrease in attendances for radiation therapy. This is similar for Māori (6%) and non-Māori/non-Pacific (7%). This may be the result of national hypofractionation guidance. Te Aho o Te Kahu is looking into this further using the Radiation Oncology Collection (ROC database), which allows for more detailed analysis.

Haematology

Notes on data

- Extracted from National Non-admitted Patient Collection (outpatient) and National Minimum Dataset (inpatient) 27 July 2020.
- First specialist assessment (FSA) reflects counts of first attendance for specialist haematology assessment for any indication (i.e. not just cancer).
- IV chemotherapy reflects appointments for IV chemotherapy for haematological malignancies.
- Technical information: Haematology FSA (Purchase Unite Code - M30002), IV haem/chemo (Purchase Unit Code - M30020).

Results

Table 14: Absolute number and percentage change in haematology FSAs in 2020 compared to 2019 by month, and cumulative year to date

	April 2020		May 2020		June 2020		Year to date	
	Number	%	Number	%	Number	%	Number	%
Māori	0	0%	-14	-21%	-32	-44%	-23	-6%
Pacific Peoples	4	20%	-10	-28%	5	16%	-14	-9%
Non-Māori / Non-Pacific	-44	-11%	-230	-41%	30	8%	-270	-10%
Total Population	-40	-8%	-254	-38%	3	1%	-307	-10%

Figure 26: Number of haematology first specialist assessments by month and year, total population (left) and for Māori (right)

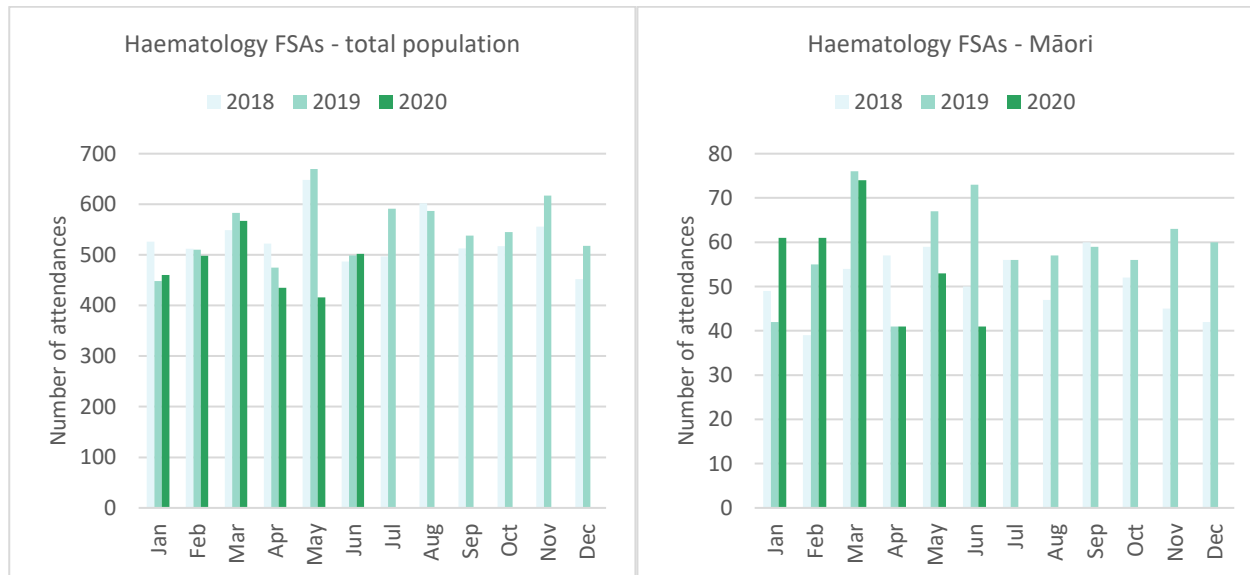


Figure 27: Cumulative number of haematology first specialist assessments by month and year, total population (left) and for Māori (right)

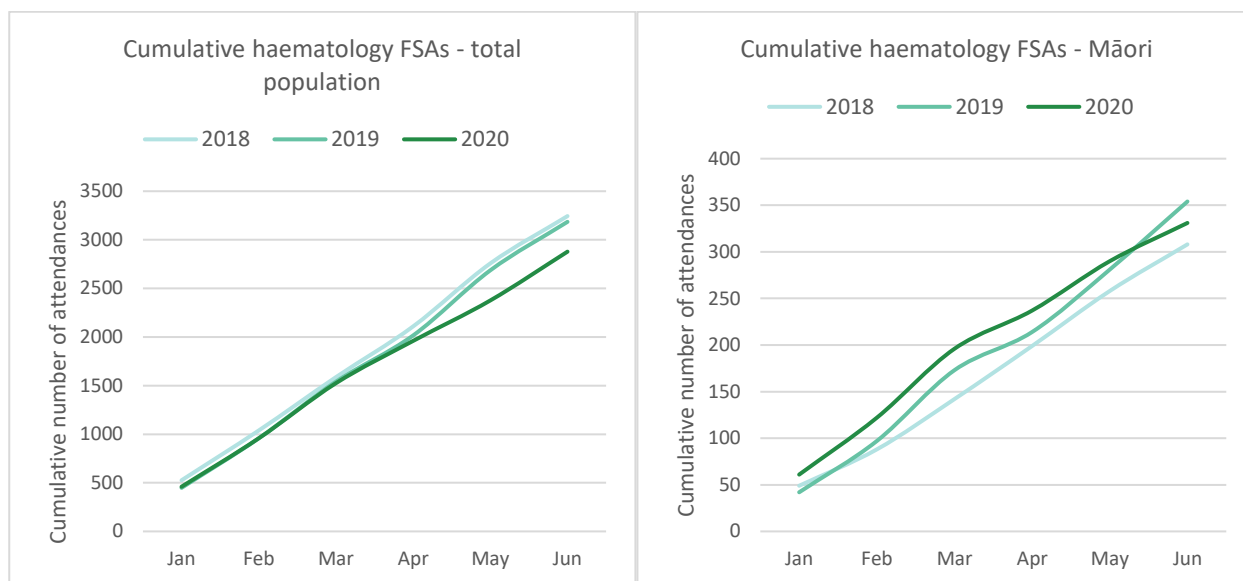


Table 15: Absolute number and percentage change in IV chemotherapy attendances for haematological malignancies in 2020 compared to 2019 by month, and cumulative year to date

	April 2020		May 2020		June 2020		Year to date	
	Number	%	Number	%	Number	%	Number	%
Māori	30	17%	-54	-23%	5	3%	45	4%
Pacific Peoples	31	42%	34	47%	93	160%	144	29%
Non-Māori / Non-Pacific	-115	-8%	-185	-11%	376	27%	-679	-7%
Total Population	-54	-3%	-205	-10%	474	29%	868	8%

Figure 28: Number attendances for IV chemotherapy for haematological malignancies by month and year, total population (left) and for Māori (right)

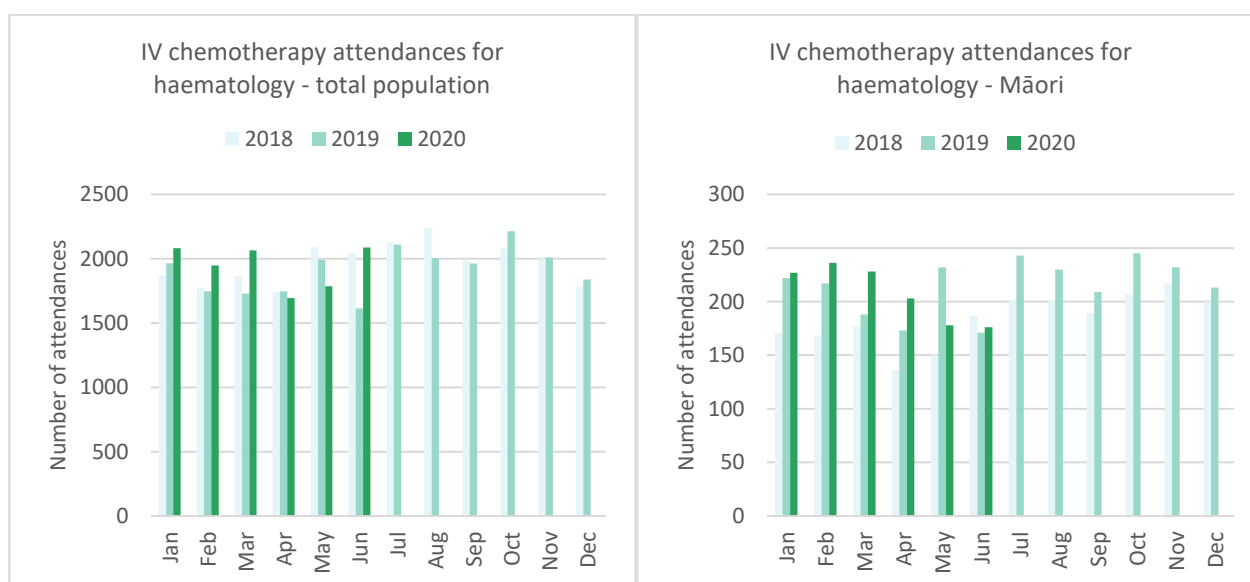
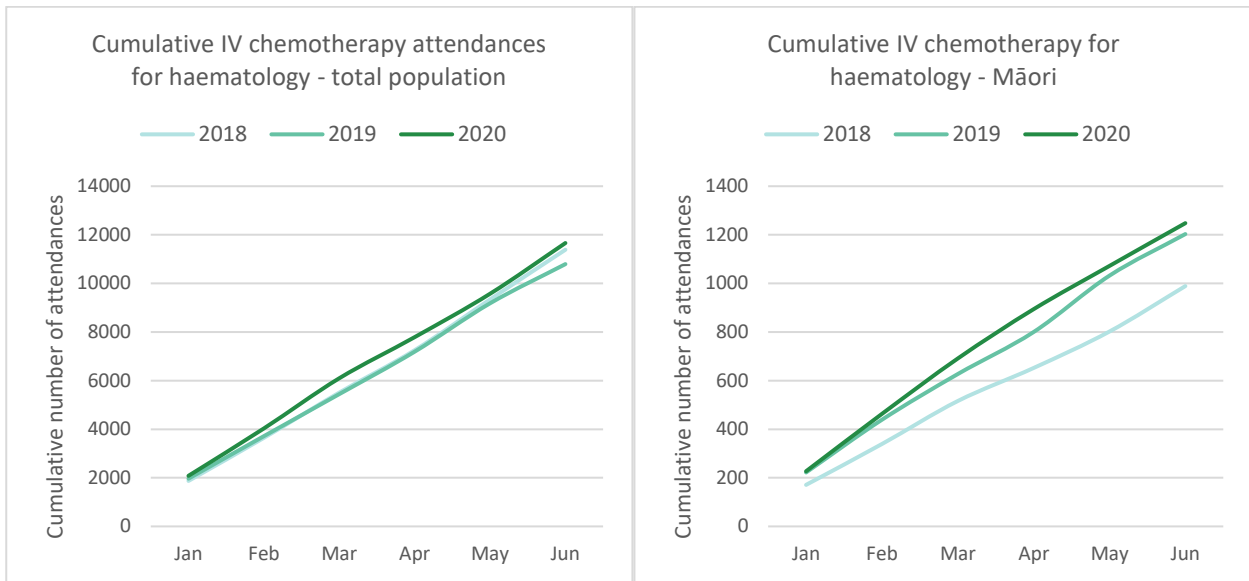


Figure 29: Cumulative number of attendances for IV chemotherapy for haematological malignancies by month and year, total population (left) and for Māori (right)



Key points

- Overall, for the year to date there has been a 10% decrease in haematology first specialist appointments compared to the same time period in 2019. One contributor to this is likely to be a decrease in FSAs for non-malignant, non-urgent indications, deferred as part of the hospital response framework. These cases may have been managed in primary care.
- For the year to date there has been an 8% increase in IV chemotherapy for haematology compared to the same time period in 2019.

Appendix 1: NZCR data information

The New Zealand Cancer Registry as a source of data for new cancer diagnoses

Cancer registration is a process where data is collated from multiple sources about people diagnosed with cancer and rules are applied to determine the type of cancer they have. This information is recorded in the New Zealand Cancer Registry. Each tumour is classified using an international World Health Organisation standard so that cancer incidence can be compared between countries. The tumour is staged based on all the information available within 4 months of diagnosis. This process may take up to six months or more depending on the number of missing reports that need to be followed up with laboratories.

For each registration there may be multiple pathology reports as there may be multiple procedures performed on the tumour. This means there will be more than one registration for people diagnosed with more than one type of tumour.

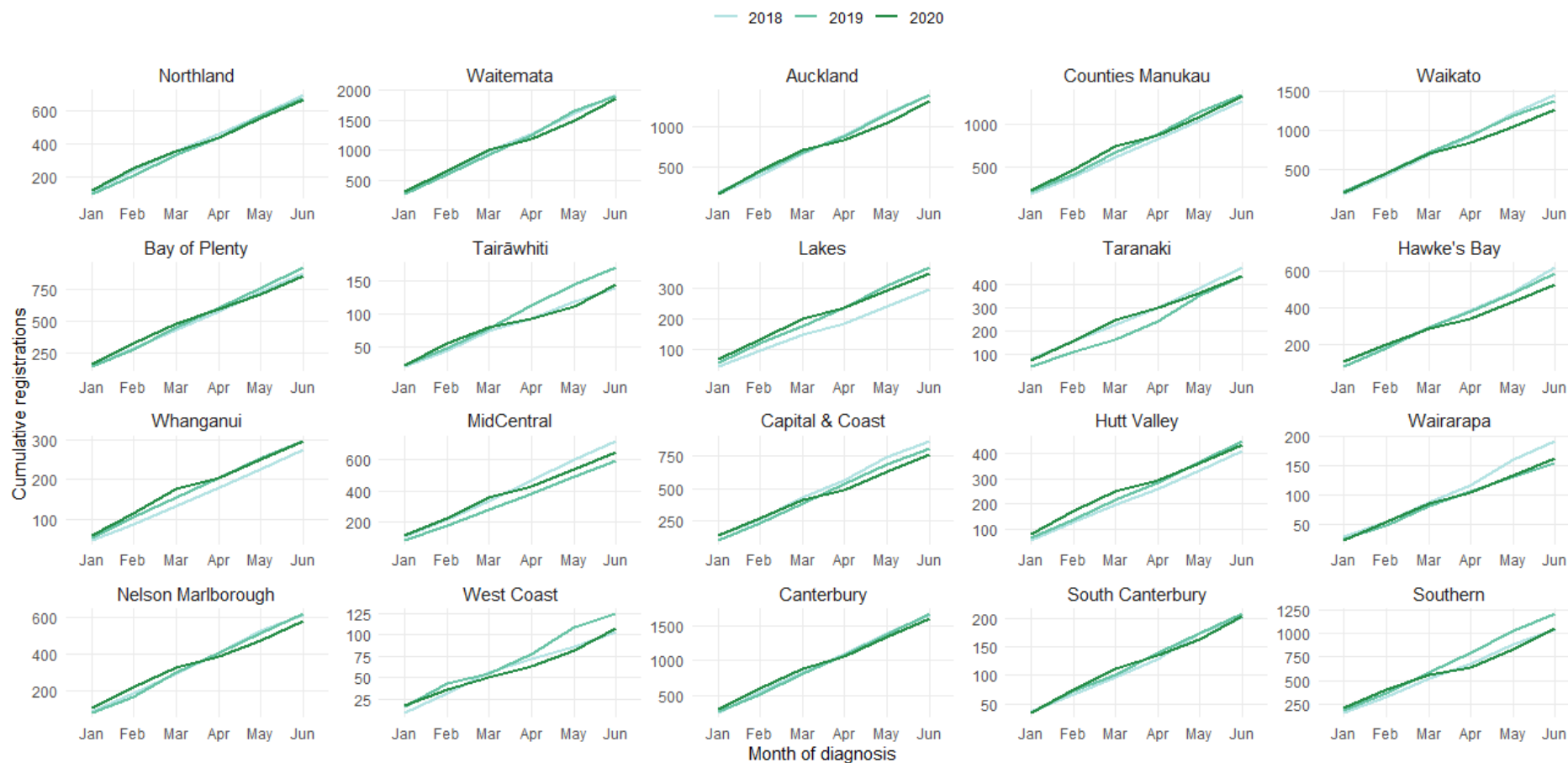
Cancer registrations come from pathology laboratories, haematology laboratories, mortality records and reviewing hospital discharge records. Laboratory reports provide the best source of near real time data to monitor new diagnoses of cancer in New Zealand.

Pathology reports as a data source for providing near real time monitoring cancer diagnoses

Pathology reports (documents) are received by the NZCR as electronic messages. An administrator triages these documents each day and if the document appears to meet the requirements for registration the document is “administered”. The document may relate to an existing registration or may contain information for a new cancer event. Documents that do not meet the cancer reporting requirements will be marked as “deleted”, “rejected” or “agreed not for registration”.

The administrator creates a new provisional cancer event if the pathology report identifies a new cancer diagnosis for this person. This new cancer event is assigned to a cancer group and this provisional event is then queued for further assessment by a clinical coder. If the required information has been provided the coder creates a new registration. If some information is not yet available, then the registration is held open until further information arrives to complete the registration or determine that the tumour does not meet the registration criteria.

Appendix 2: NZCR registrations by DHB



Cancer Registrations by DHB

	Total					Māori					European/Other*				
	Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020	
	2018	2019	2020	Number	%	2018	2019	2020	Number	%	2018	2019	2020	Number	%
Northland	695	671	664	-7	-1	155	113	131	18	15.9	526	540	518	-22	-4.1
Waitemata	1922	1911	1861	-50	-2.6	92	90	111	21	23.3	1591	1588	1470	-118	-7.4
Auckland	1391	1389	1318	-71	-5.1	57	70	51	-19	-27.1	1062	997	991	-6	-0.6
Counties Manukau	1269	1345	1336	-9	-0.7	127	146	168	22	15.1	789	811	773	-38	-4.7
Waikato	1445	1366	1261	-105	-7.7	207	204	166	-38	-18.6	1153	1099	1027	-72	-6.6
Bay of Plenty	879	919	854	-65	-7.1	121	133	113	-20	-15	744	763	722	-41	-5.4
Tairāwhiti	140	170	145	-25	-14.7	41	56	60	4	7.1	99	110	83	-27	-24.5
Lakes	296	369	349	-20	-5.4	76	83	78	-5	-6	204	264	250	-14	-5.3
Taranaki	473	438	439	1	0.2	47	38	39	1	2.6	414	398	394	-4	-1
Hawke's Bay	620	591	529	-62	-10.5	92	95	78	-17	-17.9	504	473	435	-38	-8
Whanganui	276	296	297	1	0.3	34	53	36	-17	-32.1	237	239	254	15	6.3
MidCentral	720	595	647	52	8.7	84	55	59	4	7.3	619	514	560	46	8.9
Capital & Coast	870	814	760	-54	-6.6	56	57	63	6	10.5	694	666	605	-61	-9.2
Hutt Valley	414	452	437	-15	-3.3	47	63	39	-24	-38.1	331	342	358	16	4.7
Wairarapa	192	154	163	9	5.8	20	8	18	10		168	142	138	-4	-2.8
Nelson Marlborough	611	619	577	-42	-6.8	26	28	20	-8	-28.6	573	578	545	-33	-5.7
West Coast	103	124	107	-17	-13.7	5	6	6	0		98	115	100	-15	-13
Canterbury	1658	1674	1601	-73	-4.4	97	80	88	8	10	1465	1512	1405	-107	-7.1
South Canterbury	202	209	205	-4	-1.9	12	9	7	-2		184	199	193	-6	-3
Southern	1048	1213	1059	-154	-12.7	34	70	51	-19	-27.1	983	1123	979	-144	-12.8
Total	15247	15331	14642	-689	-4.5	1430	1457	1383	-74	-5.1	12452	12480	11820	-660	-5.3

Appendix 3: Diagnosis and treatment data by DHB

Percentage differences are only presented if the cumulative 2019 total is 10 or greater. In some cases, the grand totals may differ slightly to those presented in the national report. This is due to non-DHB providers being excluded from the analyses within this appendix.

Gastrointestinal endoscopy

	Total					Māori					Non-Māori/Non-Pacific				
	Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020	
	2018	2019	2020	Number	%	2018	2019	2020	Number	%	2018	2019	2020	Number	%
Northland	1771	2056	1447	-609	-30%	288	391	269	-122	-31%	1475	1644	1166	-478	-29%
Waitemata	3919	4390	4006	-384	-9%	207	257	220	-37	-14%	3569	3992	3612	-380	-10%
Auckland	2963	3068	2448	-620	-20%	158	140	139	-1	-1%	2623	2722	2101	-621	-23%
Counties Manukau	3965	4275	5064	789	18%	379	407	509	102	25%	3117	3288	3860	572	17%
Waikato	2521	3153	2946	-207	-7%	304	366	367	1	0%	2176	2749	2532	-217	-8%
Bay of Plenty	2356	2280	2133	-147	-6%	269	304	284	-20	-7%	2077	1969	1841	-128	-7%
Lakes	952	932	787	-145	-16%	175	170	153	-17	-10%	762	750	615	-135	-18%
Tairāwhiti	319	366	308	-58	-16%	87	110	96	-14	-13%	230	253	207	-46	-18%
Taranaki	985	913	833	-80	-9%	97	101	65	-36	-36%	884	807	763	-44	-5%
Whanganui	704	739	575	-164	-22%	108	95	75	-20	-21%	595	642	494	-148	-23%
Hawke's Bay	1200	1414	1264	-150	-11%	131	164	169	5	3%	1057	1231	1075	-156	-13%
MidCentral	1029	1033	1049	16	2%	61	76	94	18	24%	958	947	945	-2	0%
Capital & Coast	1411	1411	1524	113	8%	112	70	120	50	71%	1245	1278	1350	72	6%
Hutt Valley	1116	1505	1496	-9	-1%	89	116	152	36	31%	985	1344	1293	-51	-4%
Nelson Marlborough	467	1215	1177	-38	-3%	22	69	66	-3	-4%	442	1140	1102	-38	-3%
Canterbury	2958	4540	3602	-938	-21%	157	266	204	-62	-23%	2757	4209	3345	-864	-21%
South Canterbury	557	601	567	-34	-6%	24	23	23	0	0%	533	578	543	-35	-6%
Southern	2182	2403	1675	-728	-30%	88	122	93	-29	-24%	2078	2263	1565	-698	-31%
Wairarapa	427	518	381	-137	-26%	35	48	34	-14	-29%	384	466	343	-123	-26%
West Coast	317	294	332	38	13%	22	17	11	-6	-35%	294	276	319	43	16%
Grand Total	32119	37106	33614	-3492	-9%	2813	3312	3143	-169	-5%	28241	32548	29071	-3477	-11%

Bronchoscopy

	Total					Māori					Non-Māori/Non-Pacific				
	Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020	
	2018	2019	2020	Number	%	2018	2019	2020	Number	%	2018	2019	2020	Number	%
Northland	44	33	32	-1	-3%	13	11	9	-2	-18%	30	22	22	0	0%
Waitemata	72	78	62	-16	-21%	3	3	6	3	-	65	74	53	-21	-28%
Auckland	148	196	151	-45	-23%	12	19	16	-3	-16%	121	163	119	-44	-27%
Counties Manukau	172	180	171	-9	-5%	36	30	16	-14	-47%	114	122	128	6	5%
Waikato	138	141	94	-47	-33%	29	32	22	-10	-31%	106	107	71	-36	-34%
Bay of Plenty	71	91	65	-26	-29%	13	22	18	-4	-18%	58	67	47	-20	-30%
Lakes	37	46	34	-12	-26%	15	14	16	2	14%	22	31	17	-14	-45%
Tairāwhiti	1	2	14	12	-	1	1	5	4	-	0	1	9	8	-
Taranaki	22	25	18	-7	-28%	4	6	0	-6	-	18	19	18	-1	-5%
Whanganui	3	10	7	-3	-30%	0	5	2	-3	-	3	5	5	0	-
Hawke's Bay	39	40	17	-23	-58%	11	10	2	-8	-80%	28	29	14	-15	-52%
MidCentral	22	18	12	-6	-33%	3	5	1	-4	-	19	13	11	-2	-15%
Capital & Coast	47	48	29	-19	-40%	6	5	5	0	-	38	42	23	-19	-45%
Hutt Valley	43	63	39	-24	-38%	6	13	6	-7	-54%	34	50	32	-18	-36%
Nelson Marlborough	34	33	44	11	33%	4	4	5	1	-	30	29	38	9	31%
Canterbury	167	206	187	-19	-9%	11	21	8	-13	-62%	155	183	174	-9	-5%
South Canterbury	6	6	9	3	-	0	1	0	-1	-	6	5	9	4	-
Southern	119	136	67	-69	-51%	8	12	8	-4	-33%	111	121	59	-62	-51%
Grand Total	1185	1352	1052	-300	-22%	175	214	145	-69	-32%	958	1083	849	-234	-22%

Colorectal cancer surgery

	Total					Māori					Non-Māori/Non-Pacific				
	Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020	
	2018	2019	2020	Number	%	2018	2019	2020	Number	%	2018	2019	2020	Number	%
Northland	36	53	43	-10	-19%	6	10	12	2	20%	30	43	31	-12	-28%
Waitemata	137	129	111	-18	-14%	9	10	9	-1	-10%	125	109	99	-10	-9%
Auckland	95	95	97	2	2%	5	6	11	5	-	83	76	82	6	8%
Counties Manukau	79	61	78	17	28%	6	5	15	10	-	64	53	54	1	2%
Waikato	108	106	123	17	16%	12	8	17	9	-	93	97	105	8	8%
Bay of Plenty	70	72	89	17	24%	11	6	12	6	-	59	65	77	12	18%
Lakes	32	41	37	-4	-10%	5	7	7	0	-	27	34	30	-4	-12%
Tairāwhiti	9	15	14	-1	-7%	4	2	3	1	-	5	13	11	-2	-15%
Taranaki	45	45	34	-11	-24%	5	3	4	1	-	40	42	30	-12	-29%
Whanganui	28	25	22	-3	-12%	3	1	2	1	-	25	24	20	-4	-17%
Hawke's Bay	76	74	61	-13	-18%	13	5	9	4	-	63	68	50	-18	-26%
MidCentral	64	54	61	7	13%	5	2	6	4	-	59	51	55	4	8%
Capital & Coast	72	76	71	-5	-7%	5	8	10	2	-	64	65	59	-6	-9%
Hutt Valley	30	28	25	-3	-11%	1	2	2	0	-	27	26	23	-3	-12%
Nelson Marlborough	50	42	33	-9	-21%	0	5	2	-3	-	50	37	31	-6	-16%
Canterbury	159	157	144	-13	-8%	8	8	12	4	-	148	147	129	-18	-12%
South Canterbury	28	26	17	-9	-35%	0	1	2	1	-	28	25	15	-10	-40%
Southern	117	136	102	-34	-25%	6	5	1	-4	-	110	130	100	-30	-23%
Wairarapa	13	9	3	-6	-	1	0	0	0	-	12	9	3	-6	-
West Coast	1	3	4	1	-	-	-	-	-	-	1	3	4	1	-
Grand Total	1249	1247	1169	-78	-6%	105	94	136	42	45%	1113	1117	1008	-109	-10%

Lung cancer surgery

	Total					Māori					Non-Māori/Non-Pacific				
	Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020	
	2018	2019	2020	Number	%	2018	2019	2020	Number	%	2018	2019	2020	Number	%
Auckland	134	141	130	-11	-8%	20	32	21	-11	-34%	106	100	97	-3	-3%
Counties Manukau	1	1	2	1	-	0	0	1	1	-	0	1	1	0	-
Waikato	54	69	85	16	23%	19	22	20	-2	-9%	33	47	64	17	36%
Capital & Coast	57	71	48	-23	-32%	13	11	6	-5	-45%	41	56	40	-16	-29%
Canterbury	40	46	55	9	20%	2	1	3	2	-	38	45	52	7	16%
Southern	16	24	13	-11	-46%	3	0	1	1	-	13	24	12	-12	-50%
Grand Total	302	352	333	-19	-5%	57	66	52	-14	-21%	231	273	266	-7	-3%

Prostate cancer surgery

	Total					Māori					Non-Māori/Non-Pacific				
	Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020	
	2018	2019	2020	Number	%	2018	2019	2020	Number	%	2018	2019	2020	Number	%
Northland	25	26	17	-9	-35%	4	2	5	3	-	21	23	12	-11	-48%
Waitemata	37	31	59	28	90%	1	2	1	-1	-	36	29	56	27	93%
Auckland	44	49	62	13	27%	1	4	4	0	-	40	41	58	17	41%
Counties Manukau	0	0	0	0	-	-	-	-	-	-	0	0	0	0	-
Waikato	36	35	27	-8	-23%	1	1	1	0	-	35	34	25	-9	-26%
Bay of Plenty	1	2	0	-2	-	0	1	0	-1	-	1	1	0	-1	-
Tairāwhiti	4	2	6	4	-	1	2	2	0	-	3	0	4	4	-
Taranaki	11	12	17	5	42%	1	1	4	3	-	10	11	13	2	18%
Whanganui	2	2	1	-1	-	0	0	0	0	-	2	2	1	-1	-
Hawke's Bay	4	10	9	-1	-10%	0	1	3	2	-	4	9	6	-3	-
MidCentral	35	43	41	-2	-5%	2	5	2	-3	-	33	38	39	1	3%
Capital & Coast	26	30	32	2	7%	1	2	1	-1	-	23	26	31	5	19%
Nelson Marlborough	27	15	23	8	53%	-	-	-	-	-	27	14	23	9	64%
Canterbury	36	33	39	6	18%	0	1	2	1	-	36	32	37	5	16%
South Canterbury	8	6	9	3	-						8	6	9	3	-
Southern	34	39	48	9	23%	4	2	4	2	-	30	36	44	8	22%
Wairarapa	4	5	4	-1	-	1	0	1	1	-	3	5	3	-2	-
West Coast	4	3	2	-1	-	0	0	0	0	-	4	3	2	-1	-
Grand Total	338	343	396	53	15%	17	24	30	6	25%	316	310	363	53	17%

Medical oncology first specialist assessments

	Total					Māori					Non-Māori/Non-Pacific				
	Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020	
	2018	2019	2020	Number	%	2018	2019	2020	Number	%	2018	2019	2020	Number	%
Northland	224	247	203	-44	-18%	59	61	56	-5	-8%	165	183	144	-39	-21%
Auckland	1105	1149	1289	140	12%	132	119	143	24	20%	837	883	964	81	9%
Waikato	425	377	405	28	7%	96	82	89	7	9%	321	285	310	25	9%
Bay of Plenty	224	226	268	42	19%	39	52	45	-7	-13%	184	173	222	49	28%
Lakes	41	89	91	2	2%	17	26	25	-1	-4%	23	62	66	4	6%
Tairāwhiti	41	73	68	-5	-7%	20	29	33	4	14%	21	44	35	-9	-20%
Taranaki	115	107	118	11	10%	10	14	14	0	0%	104	93	103	10	11%
MidCentral	531	510	540	30	6%	80	88	84	-4	-5%	439	413	447	34	8%
Capital & Coast	446	424	438	14	3%	45	56	59	3	5%	370	348	354	6	2%
Nelson Marlborough	226	200	220	20	10%	15	17	10	-7	-41%	210	182	209	27	15%
Canterbury	601	687	638	-49	-7%	40	49	37	-12	-24%	553	629	590	-39	-6%
South Canterbury	1	2	35	33	-	0	0	2	2	-	1	2	33	31	-
Southern	285	367	314	-53	-14%	13	22	17	-5	-23%	271	344	293	-51	-15%
West Coast	14	17	7	-10	-59%	0	2	0	-2	-	14	14	7	-7	-50%
Grand Total	4279	4475	4634	159	4%	566	617	614	-3	0%	3513	3655	3777	122	3%

Medical oncology IV chemotherapy

	Total					Māori					Non-Māori/Non-Pacific				
	Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020	
	2018	2019	2020	Number	%	2018	2019	2020	Number	%	2018	2019	2020	Number	%
Northland	1555	1384	1492	108	8%	287	324	463	139	43%	1250	1048	1014	-34	-3%
Waitemata	0	2	0	-2	-	-	-	-	-	-	0	2	0	-2	-
Auckland	8347	9620	10930	1310	14%	887	828	1234	406	49%	6543	7563	8439	876	12%
Waikato	3436	3766	3026	-740	-20%	511	621	512	-109	-18%	2884	3102	2463	-639	-21%
Bay of Plenty	2618	2346	2892	546	23%	470	398	582	184	46%	2108	1926	2292	366	19%
Lakes	1310	1503	1501	-2	0%	379	405	462	57	14%	882	1084	1027	-57	-5%
Tairāwhiti	385	289	275	-14	-5%	174	130	133	3	2%	211	159	141	-18	-11%
Taranaki	785	873	1019	146	17%	106	52	102	50	96%	670	810	903	93	11%
Whanganui	69	44	48	4	9%	15	5	7	2	-	54	39	41	2	5%
Hawke's Bay	12	18	46	28	156%	3	3	36	33	-	9	15	10	-5	-33%
MidCentral	3240	3960	3817	-143	-4%	414	747	602	-145	-19%	2753	3094	3166	72	2%
Capital & Coast	3047	3494	3180	-314	-9%	295	341	382	41	12%	2617	2971	2600	-371	-12%
Hutt Valley	61	54	46	-8	-15%	9	2	2	0	-	52	47	39	-8	-17%
Nelson Marlborough	1531	1285	1473	188	15%	138	91	74	-17	-19%	1370	1164	1383	219	19%
Canterbury	3393	2929	3101	172	6%	212	190	202	12	6%	3074	2676	2784	108	4%
South Canterbury	534	533	517	-16	-3%	5	2	11	9	-	529	519	506	-13	-3%
Southern	3285	3642	3564	-78	-2%	198	174	233	59	34%	3069	3446	3274	-172	-5%
Wairarapa	11	5	34	29	-	0	1	8	7	-	11	4	25	21	-
West Coast	6	26	21	-5	-19%	0	0	4	4	-	6	26	17	-9	-35%
Grand Total	33625	35773	36982	1209	3%	4103	4314	5049	735	17%	28092	29695	30124	429	1%

Radiation oncology first specialist assessments

	Total					Māori					Non-Māori/Non-Pacific				
	Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020	
	2018	2019	2020	Number	%	2018	2019	2020	Number	%	2018	2019	2020	Number	%
Northland	168	186	133	-53	-28%	51	40	49	9	23%	115	143	83	-60	-42%
Auckland	1591	1547	1563	16	1%	187	190	172	-18	-9%	1206	1173	1218	45	4%
Waikato	674	727	741	14	2%	114	124	161	37	30%	548	587	573	-14	-2%
Bay of Plenty	400	484	459	-25	-5%	57	60	66	6	10%	341	419	389	-30	-7%
Lakes	26	13	6	-7	-54%	5	3	3	0	-	21	10	3	-7	-70%
Tairāwhiti	42	30	26	-4	-13%	16	10	13	3	30%	25	20	13	-7	-35%
MidCentral	901	755	876	121	16%	106	100	118	18	18%	785	646	744	98	15%
Capital & Coast	686	712	665	-47	-7%	67	70	70	0	0%	586	610	565	-45	-7%
Nelson Marlborough	20	112	97	-15	-13%	1	6	7	1	-	19	105	89	-16	-15%
Canterbury	807	772	946	174	23%	37	47	41	-6	-13%	762	712	893	181	25%
Southern	525	482	503	21	4%	28	26	39	13	50%	488	450	456	6	1%
West Coast	3	7	3	-4	-	0	1	0	-1	-	3	6	3	-3	-
Grand Total	5843	5827	6018	191	3%	669	677	739	62	9%	4899	4881	5029	148	3%

Radiation oncology megavoltage fractions

	Total					Māori					Non-Māori/Non-Pacific				
	Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020	
	2018	2019	2020	Number	%	2018	2019	2020	Number	%	2018	2019	2020	Number	%
Auckland	21904	22371	20331	-2040	-9%	2768	3081	2404	-677	-22%	16867	17209	15638	-1571	-9%
Waikato	10382	11441	9697	-1744	-15%	1938	2039	2108	69	3%	8260	9203	7480	-1723	-19%
Bay of Plenty	10226	7247	8131	884	12%	1871	1182	1305	123	10%	8184	6032	6694	662	11%
MidCentral	10528	11810	10841	-969	-8%	1540	1577	1424	-153	-10%	8865	10154	9246	-908	-9%
Capital & Coast	9911	10255	9557	-698	-7%	1034	1039	1098	59	6%	8402	8715	8009	-706	-8%
Nelson Marlborough	0	0	9	9	-	0	0	2	2	-	0	0	7	7	-
Canterbury	14125	11426	11747	321	3%	910	716	775	59	8%	12931	10597	10831	234	2%
Southern	3884	2738	2048	-690	-25%	328	163	131	-32	-20%	3442	2541	1910	-631	-25%
Grand Total	80960	77288	72361	-4927	-6%	10389	9797	9247	-550	-6%	66951	64451	59815	-4636	-7%

Haematology first specialist assessment

	Total					Māori					Non-Māori/Non-Pacific				
	Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020	
	2018	2019	2020	Number	%	2018	2019	2020	Number	%	2018	2019	2020	Number	%
Northland	105	112	117	5	4%	17	27	29	2	7%	87	83	87	4	5%
Waitemata	380	311	350	39	13%	16	21	28	7	33%	346	280	307	27	10%
Auckland	483	472	363	-109	-23%	34	37	31	-6	-16%	402	386	288	-98	-25%
Counties Manukau	385	360	280	-80	-22%	36	50	36	-14	-28%	288	258	199	-59	-23%
Waikato	345	386	381	-5	-1%	54	79	63	-16	-20%	285	300	311	11	4%
Bay of Plenty	200	189	148	-41	-22%	33	29	23	-6	-21%	164	155	122	-33	-21%
Lakes	0	2	0	-2	-	0	1	0	-1	-	0	1	0	-1	-
Tairāwhiti	22	15	19	4	27%	9	1	3	2	-	13	13	16	3	23%
Taranaki	70	80	93	13	16%	10	6	11	5	-	60	73	82	9	12%
MidCentral	373	386	361	-25	-6%	49	47	44	-3	-6%	321	335	309	-26	-8%
Capital & Coast	404	371	331	-40	-11%	23	31	38	7	23%	370	324	276	-48	-15%
Nelson Marlborough	116	79	57	-22	-28%	1	4	3	-1	-	114	74	54	-20	-27%
Canterbury	212	269	250	-19	-7%	13	14	14	0	0%	192	247	233	-14	-6%
Southern	140	143	127	-16	-11%	12	7	8	1	-	125	134	118	-16	-12%
West Coast	9	10	1	-9	-90%	1	0	0	0	-	8	10	1	-9	-90%
Grand Total	3244	3185	2878	-307	-10%	308	354	331	-23	-6%	2775	2673	2403	-270	-10%

Haematology IV chemotherapy

	Total					Māori					Non-Māori/Non-Pacific				
	Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020		Cumulative number for Jan to June			Difference between 2019 and 2020	
	2018	2019	2020	Number	%	2018	2019	2020	Number	%	2018	2019	2020	Number	%
Northland	970	890	694	-196	-22%	232	187	133	-54	-29%	738	674	534	-140	-21%
Waitemata	1982	1992	1957	-35	-2%	46	81	101	20	25%	1847	1806	1736	-70	-4%
Auckland	1730	1793	1664	-129	-7%	93	129	60	-69	-53%	1465	1450	1451	1	0%
Counties Manukau*	1175	432	1149	717		183	68	103	35		709	305	871	566	
Waikato	892	955	1079	124	13%	131	172	206	34	20%	757	781	873	92	12%
Bay of Plenty	590	651	501	-150	-23%	69	48	66	18	38%	521	575	435	-140	-24%
Lakes	10	331	315	-16	-5%	0	97	77	-20	-21%	10	234	238	4	2%
Tairāwhiti	106	50	50	0	0%	10	10	4	-6	-60%	83	40	46	6	15%
MidCentral	1286	1420	1177	-243	-17%	146	164	106	-58	-35%	1119	1256	1065	-191	-15%
Capital & Coast	1492	1685	1595	-90	-5%	22	217	213	-4	-2%	1400	1413	1255	-158	-11%
Nelson Marlborough	0	0	6	6	-	0	0	0	0	-	0	0	6	6	-
Canterbury*	1039	485	1357	872		56	27	159	132		970	458	1171	713	
Southern**	110	101	114	13	13%	1	1	20	19	-	109	100	93	-7	-7%
West Coast	4	9	4	-5	-	0	2	0	-2	-	4	7	4	-3	-
Grand Total	11386	10794	11662	868	8%	989	1203	1248	45	4%	9732	9099	9778	679	7%

*Te Aho o Te Kahu are working with Canterbury and Counties Manukau DHB to understand the cause for low volumes in 2019. Number and percentage differences have not been presented as will not accurately reflect the difference between 2019 and 2020 in these DHBs.

** Note the relatively low volumes in Southern DHB are due to variation in coding which is being followed up on.

Appendix 4: Surgical procedure codes

Below is a list of the surgical procedure codes that were used for analysis on curative cancer surgery.

COLORECTAL CANCER SURGERY		
Clinical code	Block short description	Clinical code description
3200000	Colectomy	Limited excision of large intestine with formation of stoma
3200001	Colectomy	Right hemicolectomy with formation of stoma
3200300	Colectomy	Limited excision of large intestine with anastomosis
3200301	Colectomy	Right hemicolectomy with anastomosis
3200400	Colectomy	Subtotal colectomy with formation of stoma
3200401	Colectomy	Extended right hemicolectomy with formation of stoma
3200500	Colectomy	Subtotal colectomy with anastomosis
3200501	Colectomy	Extended right hemicolectomy with anastomosis
3200600	Colectomy	Left hemicolectomy with anastomosis
3200601	Colectomy	Left hemicolectomy with formation of stoma
3200900	Colectomy	Total colectomy with ileostomy
3201200	Colectomy	Total colectomy with ileorectal anastomosis
3201500	Total proctocolectomy	Total proctocolectomy with ileostomy
3202400	Anterior resection of rectum	High anterior resection of rectum
3202500	Anterior resection of rectum	Low anterior resection of rectum
3202600	Anterior resection of rectum	Ultra low anterior resection of rectum
3202800	Anterior resection of rectum	Ultra low anterior resection of rectum with hand sutured coloanal anastomosis
3203000	Rectosigmoidectomy or proctectomy	Rectosigmoidectomy with formation of stoma
3203900	Rectosigmoidectomy or proctectomy	Abdominoperineal proctectomy
3205100	Total proctocolectomy	Total proctocolectomy with ileo-anal anastomosis
3205101	Total proctocolectomy	Total proctocolectomy with ileo-anal anastomosis and formation of temporary ileostomy
3206000	Rectosigmoidectomy or proctectomy	Restorative proctectomy
3209900	Excision of lesion or tissue of rectum or anus	Per anal submucosal excision of lesion or tissue of rectum
3211200	Rectosigmoidectomy or proctectomy	Perineal rectosigmoidectomy
9220800	Anterior resection of rectum	Anterior resection of rectum, level unspecified

LUNG CANCER SURGERY		
Clinical code	Clinical code description	Block Description
3844000	Wedge resection of lung	Partial resection of lung
3844001	Radical wedge resection of lung	Partial resection of lung
3843800	Segmental resection of lung	Partial resection of lung
9016900	Endoscopic wedge resection of lung	Partial resection of lung

3843801	Lobectomy of lung	Lobectomy of lung
3844100	Radical lobectomy	Lobectomy of lung
3844101	Radical pneumonectomy	Pneumonectomy
3843802	Pneumonectomy	Pneumonectomy

PROSTATE CANCER SURGERY

Clinical code	Block short description	Clinical code description
3720004	Open prostatectomy	Retropubic prostatectomy
3720900	Open prostatectomy	Radical prostatectomy
3720901	Other closed prostatectomy	Laparoscopic radical prostatectomy
3721000	Open prostatectomy	Radical prostatectomy with bladder neck reconstruction
3721001	Other closed prostatectomy	Laparoscopic radical prostatectomy with bladder neck reconstruction
3721100	Open prostatectomy	Radical prostatectomy with bladder neck reconstruction and pelvic lymphadenectomy
3721101	Other closed prostatectomy	Laparoscopic radical prostatectomy with bladder neck reconstruction and pelvic lymphadenectomy
3720900	Open prostatectomy	Radical prostatectomy
3720901	Closed prostatectomy	Laparoscopic radical prostatectomy
3721000	Open prostatectomy	Radical prostatectomy with bladder neck reconstruction
3721001	Closed prostatectomy	Laparoscopic radical prostatectomy with bladder neck reconstruction
3721100	Open prostatectomy	Radical prostatectomy with bladder neck reconstruction and pelvic lymphadenectomy