



TE AHO
O TE KAHU
CANCER
CONTROL
AGENCY

COVID-19 and cancer services

Working report on the impact of COVID-19 on cancer services for the period ending June 2022

Released September 2022

ACKNOWLEDGEMENTS

With thanks to the Ministry of Health Data Management team for their technical support.

With thanks to members of the COVID-19 Data Response Advisory Group: Professor Diana Sarfati, Alex Dunn, Dr John Fountain, Dr Tess Luff, John Manderson, Michelle Mako, Dr Shaun Costello, Michelle Liu, Dr Liz Dennett, Gabrielle Nicholson, Dawn Wilson, Jan Smith, Cushla Lucas, Nicholas Glubb, Moira McLeod, Angela Pidd, Christine Fowler, Dr Nina Scott, Associate Professor Bridget Robson, Dr Bronwyn Rendle and Associate Professor Jason Gurney.

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SUMMARY OF FINDINGS

This report includes data up to June 2022, except for cancer registration data which were available up to May 2022.

Cancer registrations show a 9% increase overall compared with the average of May 2018/19 (ie, pre-COVID-19). For Māori there was an 8% increase in registrations over this time. Overall, for 2022 to date there were 4% fewer cancer surgeries performed compared to the average of 2018/19, due to lower volumes of colorectal cancer and breast cancer surgeries. For Māori, there has been a 3% increase in combined cancer surgeries for the year to date relative to 2018/19; however, the proportion of Māori lung cancer surgery in particular was down by 25% for the year to date relative to 2018/19 (16 fewer surgeries).

For 2022 to date, medical oncology first specialist assessments (FSAs) increased by 2% compared to the same period in 2018/19 and IV chemotherapy increased by 10%. Radiation oncology FSAs increased by 6% for 2022 to date compared to 2018/19; however, radiation therapy attendances and completed radiation therapy courses both decreased by 11% compared to 2018/19. For haematology, there was a 5% decrease in FSAs for 2022 to date, and an increase of 13% for IV chemotherapy attendances compared with 2018/19.

Overall, there is evidence of some downturns in delivery of some services, and these downturns are likely to be the result of the impact of the ongoing COVID-19 pandemic on the normal delivery of care, with the added impact of other illnesses such as influenza. Te Aho o Te Kahu acknowledges the ongoing pressures on the cancer care system at this time, in particular on the cancer workforce due to staff illness and capacity issues as a result of COVID-19 and other illnesses. That this reporting shows many comparable results to the pre-pandemic period suggests that cancer care staff are working diligently to ensure the continuation of cancer care in Aotearoa New Zealand. Te Aho o Te Kahu continues to work with the sector and will monitor and further investigate downturns in service delivery, with particularly focus on evidence on inequity (such as lung cancer surgery for Māori).

Background and data

- The purpose of this report is to provide a rapid assessment of the impact of COVID-19 on cancer services. It includes data up until 30 June 2022 (31 May 2022 for cancer registrations). This period includes the surge in COVID-19 cases that occurred from February 2022 as the Omicron variant spread throughout the community.
- We acknowledge individuals with cancer may have been impacted in significant ways by COVID-19, including by changes to the way care has been delivered and that these may not be captured within the available data.
- Te Aho o Te Kahu acknowledges the considerable challenges cancer services are working under during the current Omicron outbreak. Our reporting so far has not highlighted extensive disruption; however, this is not to say that there have not been significant impacts on cancer services as a result of COVID-19 and other winter illnesses such as influenza (in particular staff capacity).
- 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 cancer care.
- This report compares 2022 with an average of 2018/19 data and provides additional graphs comparing 2022 data with that from 2021, 2020 and 2018/2019.

- For the purposes of this report, we have not adjusted for expected changes in incidence over time (such as due to population growth). We acknowledge that the value of comparing current trends in registrations and treatment to pre-pandemic trends is reducing over time.
- There may be some backlogs in data entry with pandemic-related impacts on staffing across the health sector, and in particular this has prevented the presentation of cancer registration data for June. This may result in future data updates altering the current results.

Cancer diagnosis

Registrations

- For May 2022 compared to the average of May 2018/19 there was a 9% increase in cancer registrations. For Māori, there was an 8% increase in registrations in May 2022 compared with May 2018/19.
- Cumulatively up to May 2022, there has been an increase of 5% in cancer registrations compared to the average of 2018/19 and a 1% increase for Māori.

Diagnostics

- **Gastrointestinal endoscopies:** There was an increase of 20% in gastrointestinal endoscopies performed in May 2022 and of 29% in June 2022, compared to the same months in 2018/19. For Māori, this increase was 38% in May and 48% in June compared to 2018/19. For 2022 thus far, there is an 18% increase in gastrointestinal endoscopies, and a 35% increase for Māori compared with 2018/19.
- **Bronchoscopies:** May 2022 showed a 30% decrease in the number of bronchoscopies, however there was a notably higher number of bronchoscopies in May 2018/19 to which this is compared. In June there was an overall 3% increase compared to June 2018/19. For 2022 to date, there has been a 10% decrease in bronchoscopies, and a 10% increase for Māori, compared with 2018/19. For CT lung biopsy for 2022 to date, there was an 11% decrease compared with 2018/19 for the total population and an 8% decrease for Māori.

Cancer Treatment

Faster Cancer Treatment

- For 2022 to date, there has been some fluctuation in the proportion of people with a high suspicion of cancer receiving their first treatment within 62 days of receipt of referral, with overall 84% of people of the total population and 86% for Māori.

Surgery

- In May 2022, there were 11% fewer cancer surgeries (breast, prostate, lung and colorectal) compared to May 2018/19. In June 2022, there were 3% fewer cancer surgeries compared to June 2018/19. For 2022 to date there were 4% fewer surgeries performed compared to 2018/19.
- The above decreases are due to decreases in colorectal cancer surgery and breast cancer surgery (mastectomy). There were 8% fewer colorectal cancer surgeries and 5% fewer breast cancer surgeries performed in 2022 to date compared with 2018/19.
- For Māori, there has been a 3% increase in combined cancer surgeries for the year to date relative to 2018/19 (reflecting 10 more surgeries), however, the proportion of Māori lung cancer surgery in particular was down by 25% for the year to date relative to 2018/19 (16 fewer surgeries).

- For Pacific peoples there was a 25% increase for the year to date relative to 2018/19 (reflecting 25 more surgeries).

Chemotherapy and radiotherapy

- **Medical oncology:** attendances for medical oncology first specialist assessments (FSAs) showed a 2% increase in May 2022 compared to May 2018/19 and a 12% increase in June. For 2022 to date, there was an overall 8% increase in medical oncology FSAs compared with 2018/19 and a 12% increase for Māori. Attendances for intravenous (IV) chemotherapy increased by 3% in May 2022 compared to May 2018/19 and increased by 17% in June. For 2022 to date, there was a 10% increase in IV chemotherapy compared with 2018/19 overall and a 34% increase for Māori.
- **Radiation oncology:** attendances for radiation oncology first specialist assessments (FSAs) increased by 6% in May 2022 compared to May 2018/19 and increased by 1% in June 2022. For 2022 to date, there was a 5% increase in radiation oncology FSAs compared with 2018/19, with a 12% increase for Māori over this time period. Radiation therapy attendances decreased by 18% in May 2022 compared to May 2018/19 and decreased by 7% in June 2022. For 2022 to date, there was an 11% decrease in radiation therapy attendances overall and a 3% decrease for Māori. Completed radiation therapy courses decreased by 6% in May 2022 compared to May 2018/19 and decreased by 11% in June 2022. For 2022 to date, there was a decrease of 7% in completed radiation therapy courses and an increase of 3% for Māori.
- **Haematology:** there was a 11% decrease in attendances for haematology first specialist assessments (FSAs) in May 2022 compared to May 2018/19 and a 3% increase in June 2022. For 2022 to date, there was a 5% decrease in haematology FSAs compared with 2018/19, and for Māori there was a 1% increase. Attendances for haematology intravenous (IV) chemotherapy increased by 3% in May 2022 compared to May 2018/19 and a 17% increase in June 2022. For 2022 to date, there was a 13% increase in haematology IV chemotherapy compared with 2018/19 overall and for Māori.

INTRODUCTION

Purpose

The aim of this work is to collate evidence on impacts to cancer diagnosis and treatment to support policy development and response planning.

Background

In 2020, Te Aho o Te Kahu released a series of reports outlining the impact of COVID-19 on cancer services in New Zealand¹. The 2020 reports showed that cancer treatment services – surgery, medical oncology, radiation oncology and haematology – continued during the start of the COVID-19 pandemic. Following an initial drop in new cancer registrations during the April 2020 lockdown, the number of cancer registrations in 2020 increased steadily in the following months and, by the end of September, had caught up to the number seen in 2019. As the COVID-19 situation and disruptions to health care settled, Te Aho o Te Kahu stopped regular COVID-19 and cancer reporting at the end of 2020. Te Aho o Te Kahu re-instated COVID-19 monitoring with the re-emergence of COVID-19 in the community in August 2021 (Delta strain), and again during the Omicron outbreak.

Scope

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

Te Aho o Te Kahu acknowledges the considerable challenges cancer services are working under during the current Omicron outbreak. Our reporting so far has not highlighted extensive disruption; however, this is not to say that there have not been significant impacts on cancer services as a result of COVID-19 and other winter illnesses such as influenza. In particular, we are aware of widespread issues with staff capacity and pressures on the cancer workforce. It is affirmation of the hard work and dedication of the cancer workforce that this national reporting continues to only highlight pockets of disruption. We continue to liaise with cancer clinicians and service providers through our advisory groups and regional hubs and, when issues are identified, work with them to problem solve and support any work underway. We also note that the pandemic has further highlighted long-term issues within both the cancer care system (and wider health system). Te Aho o Te Kahu is maintaining a focus on supporting Te Whatu Ora, Te Aka Whai Ora and the Ministry of Health to navigate these issues and work towards system improvements.

We also acknowledge that whānau affected by cancer may have been impacted in significant ways by COVID-19, including by changes to the way care has been delivered, and that this may not be captured within the available data.

Data and analysis

The data in this report comes from the Ministry of Health's national data collections. Each section of the report includes information on where the data is from and any limitations associated with the data.

¹ Reports available here: <https://teaho.govt.nz/reports/cancer-care>
Te Aho o Te Kahu, Cancer Control Agency

Numbers in this report may not match the previous report, due to exclusion of incomplete data in the previous reports and delayed coding/submission of data.

There may be some backlogs in data entry due to pandemic-related impacts on staffing across the health sector. In particular, this backlog has meant that it is not possible to report cancer registration data for June 2022 within the current report. These backlogs may result in future data updates altering the current results and may mean any disruption to services is less severe than is reported here.

The purpose of the analysis is to rapidly measure the impact of COVID-19 and the response on cancer services; therefore, the analysis does not consider pre-existing unmet need. The report also makes direct comparisons between 2022 and previous years and does not consider any increase in cancer diagnoses or population size over time.

Comparator for this report

The first set of COVID-19 and Cancer reports, published in 2020, compared 2020 data directly with 2019 data. For reports looking at 2021 data, the main comparison used was an average of 2018 and 2019 data, due to 2020 not being considered an appropriate comparator given the disruption to health services in 2020 due to COVID-19. For the first report of 2022 we used 2021 as a comparator to 2022. For the second report of 2022 and for this, the third report of 2022, we have moved back to the previous methodology of comparing to the 2018/19 average, for a) consistency, b) to account for the variation seen in 2021 data², and c) to enable comparison to a pre-pandemic time period. We acknowledge that the value of comparing current trends in registrations and treatment to pre-pandemic trends is reducing over time.

Appendix 1 outlines key dates for COVID-19 in Aotearoa that may be of use when reviewing this report.

² For example, for several measures in the March 2022 report, there were notably higher volumes for March 2021 compared with March in other recent years, including years presented in this report (2018, 2019, and 2020). The reasons for this data spike in March 2021 may include a catch-up period following lockdowns of the previous year. Te Aho o Te Kahu, Cancer Control Agency

CANCER REGISTRATIONS

Notes on data

- The data below comes from laboratory reports to the New Zealand Cancer Register (NZCR). Cancers diagnosed without haematology or pathology, for example radiology alone, will not be counted in this analysis. Further information on these data is included in Appendix 2.
- The data below are provisional, and exact numbers will change as data are finalised. Data were extracted from NZCR on 15 Aug 2022.
- '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.
- The extract used for this report excludes carcinoma in situ for breast and cervical, meaning the numbers are lower than in the 2020 COVID-19 and Cancer reports.
- June NZCR data are excluded from this report as a lower volume of laboratory reports for the month of June were able to be processed and administered at the national level.

Key points

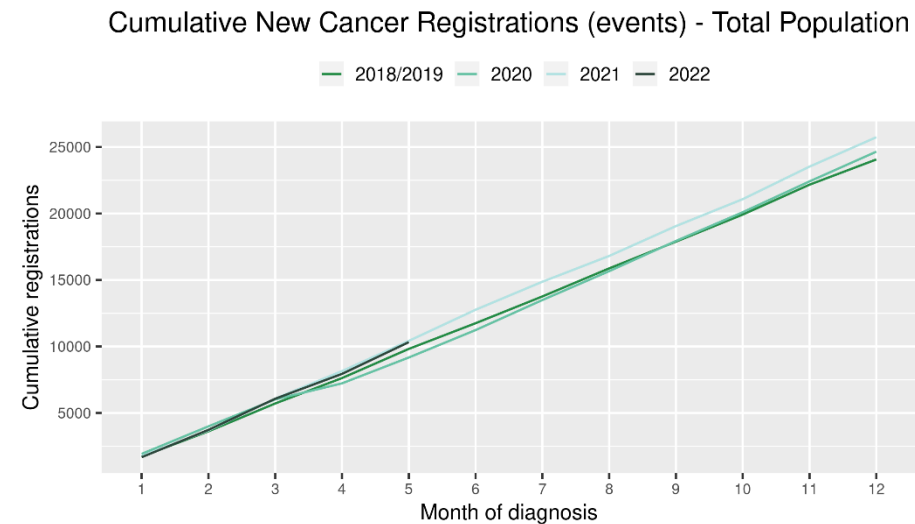
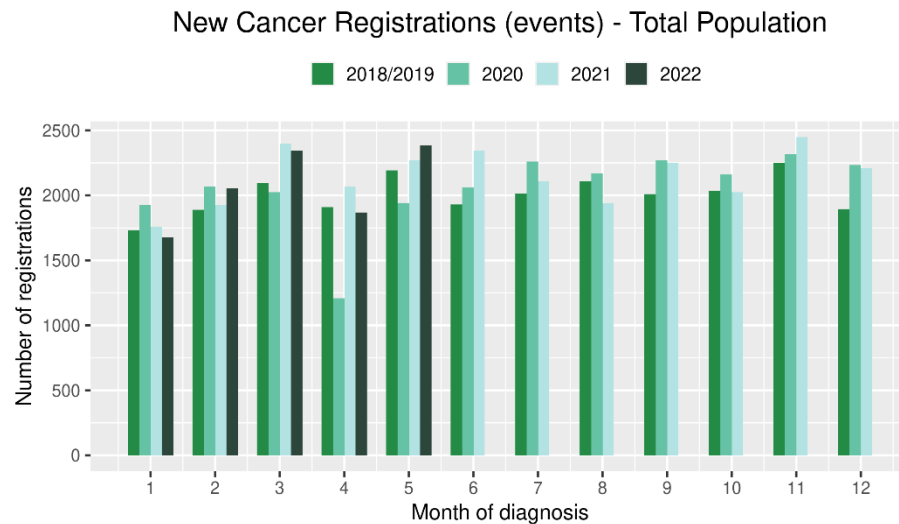
- For May 2022 compared to the average of May 2018/19 there was a 9% increase in cancer registrations. For Māori, there was an 8% increase in registrations in May 2022 compared with May 2018/19. For Pacific peoples there was an 18% increase comparing the same time periods. For people of Asian ethnicity there was an 8% increase in registrations in May 2022 compared with 2018/19.
- Cumulatively up to May 2022, there has been an increase of 5% in cancer registrations compared to the average of 2018/19 and a 1% increase for Māori.

Results

Table 1: Number of provisional cancer registrations and percentage difference in 2022 compared to the average of 2018 and 2019, by month and cumulative year to date, by ethnicity

	April			May			Cumulative January-May		
	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change
Māori	199	194	-3%	252	271	8%	1042	1062	1%
Pacific Peoples	81	91	12%	102	120	18%	420	472	13%
Asian	94	117	25%	119	129	8%	478	602	26%
European/Other	1,538	1,467	-5%	1,721	1,865	8%	7883	8191	4%
Total population	1,911	1,869	-2%	2,193	2,385	9%	9,821	10,327	5%

Figure 1: Number of cancer registrations by month, 2018/19 average, 2020, 2021 and 2022, total population and by ethnicity



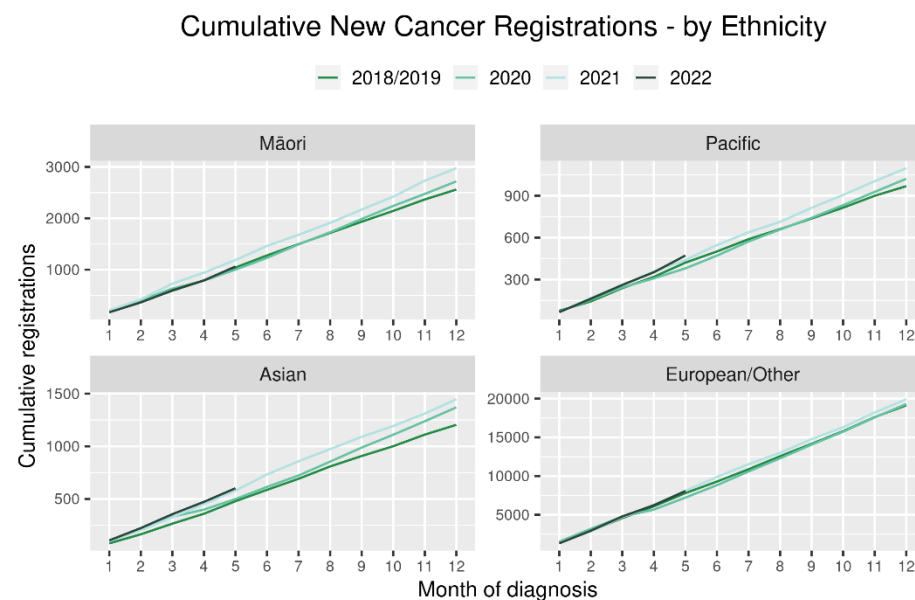
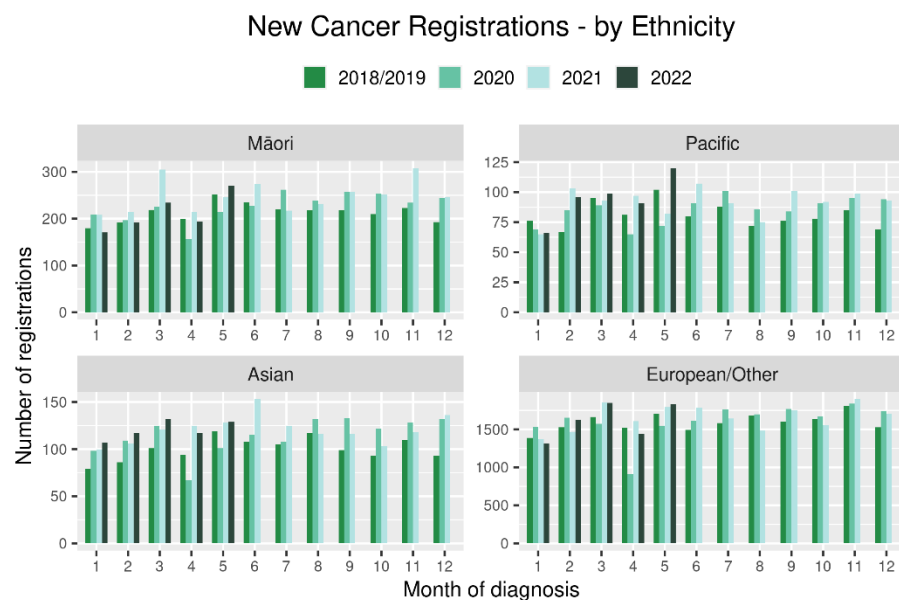


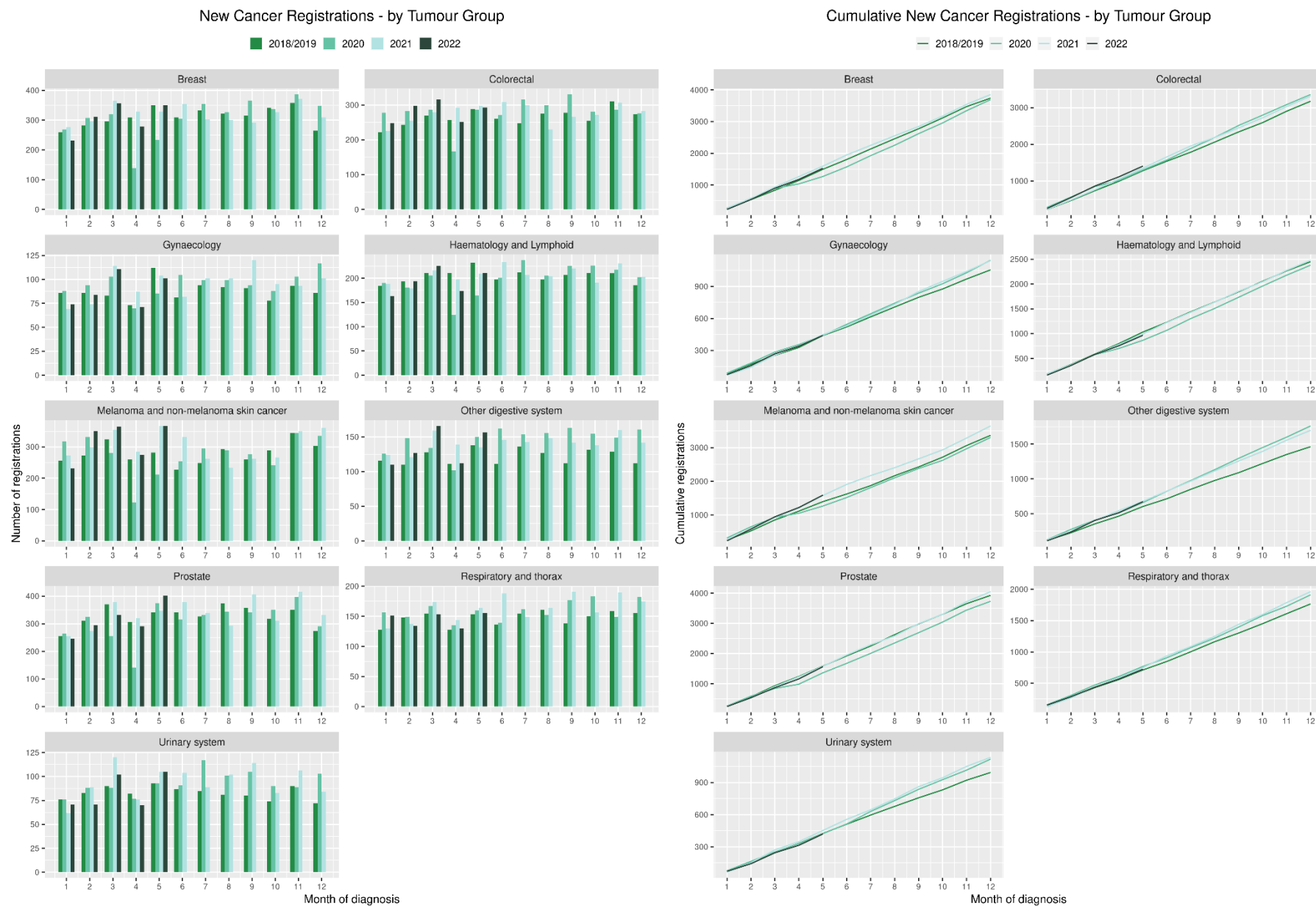
Table 2: Number of provisional cancer registrations* and percentage difference in 2022 compared to the average of 2018 and 2019, by month and cumulative year to date, by tumour group

Tumour group	April			May			Cumulative January-May		
	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change
Breast	309	278	-10%	351	351	0%	1,494	1,529	2%
Colorectal	257	251	-2%	288	293	2%	1,279	1,405	10%
Gynaecology	73	71	-2%	112	101	-10%	438	441	1%
Haematology and Lymphoid	211	173	-18%	232	211	-9%	1,030	966	-6%
Melanoma and non-melanoma skin cancer**	261	275	5%	282	367	30%	1,395	1,589	14%
Other digestive system	111	112	1%	138	157	14%	602	672	12%
Prostate	306	291	-5%	342	402	18%	1,583	1,563	-1%
Respiratory and thorax	128	130	2%	153	156	2%	711	724	2%
Urinary system	82	70	-14%	93	105	14%	422	419	-1%

*This analysis uses provisional data for the 2022 registrations, some cancers may initially be classified as 'non-specified' and subsequently be re-classified into one of the cancer groups as more information becomes available.

**For the purposes of this report, non-melanoma skin cancer excludes basal cell carcinoma and squamous cell carcinoma

Figure 2: Number of cancer registrations by month, 2018/19 average, 2020, 2021 and 2022, by tumour group



GASTROINTESTINAL ENDOSCOPY

Notes on data

- Gastrointestinal endoscopy data were extracted from the National Non-admitted Patient Collection (NNPAC) and National Minimum Dataset (NMDS) on 08 Aug 2022.
- Includes colonoscopies and gastroscopies for all indications – not just cancer.
- Technical information: gastroscopies (Purchase Unit Code: MS02005), colonoscopies (Purchase Unit Code: MS02007), combined gastroscopies and colonoscopies (Purchase Unit Code: MS02014).

Key points

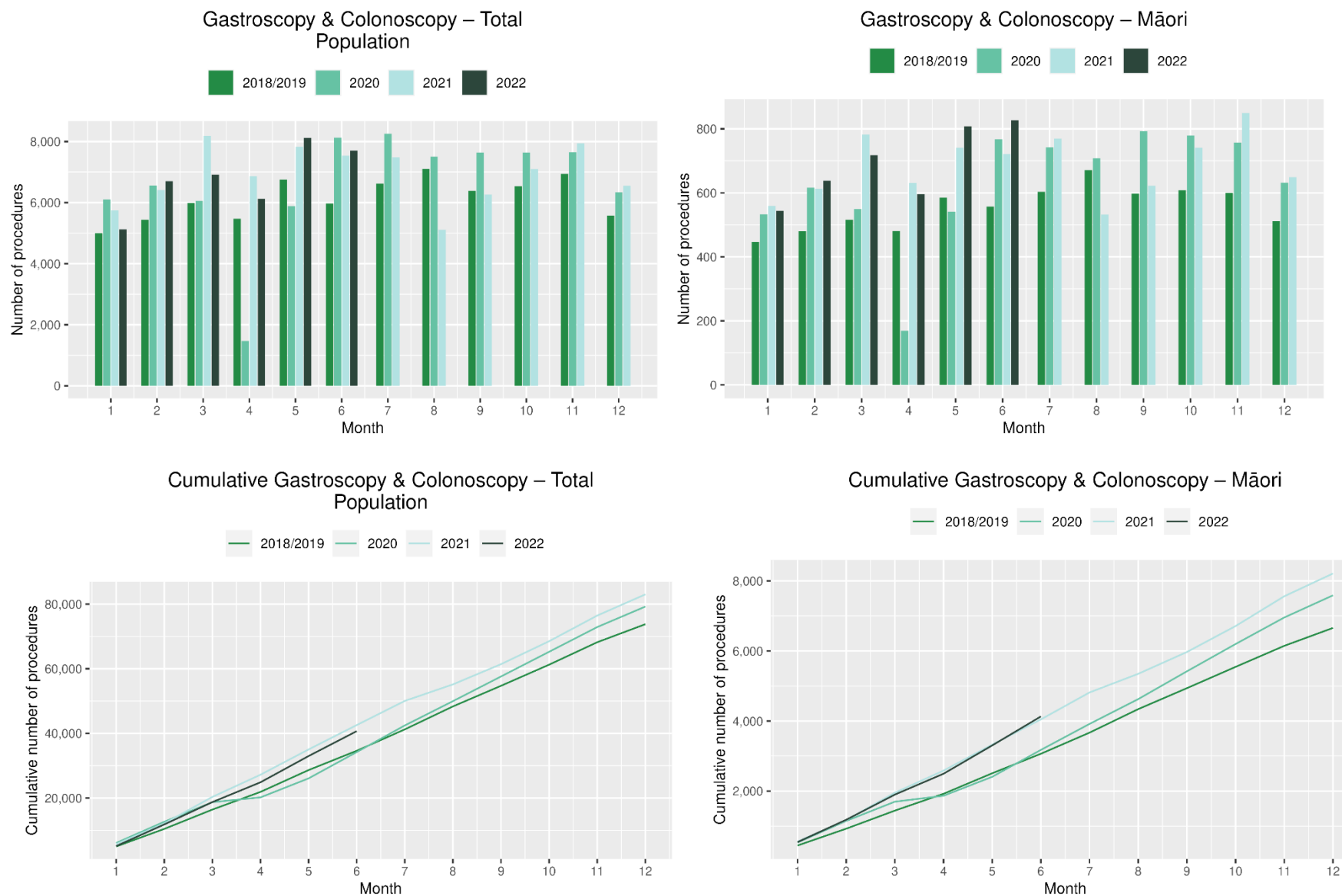
- There was an increase of 20% in gastrointestinal endoscopies performed in May 2022 and of 29% in June 2022, compared to the same months in 2018/19. For Māori, this increase was 38% in May and 48% in June compared to 2018/19.
- For 2022 thus far, there is a 18% increase in gastrointestinal endoscopies, and a 35% increase for Māori compared with 2018/19.

Results

Table 3: Number of colonoscopy and gastroscopy procedures and percentage difference in 2022 compared to the average of 2018 and 2019, by month and cumulative year to date, by ethnicity

	April			May			June			Cumulative January-June		
	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change
Māori	481	596	24%	585	808	38%	557	827	48%	3,065	4,131	35%
Pacific Peoples	183	265	45%	220	334	52%	205	335	63%	1,156	1,638	42%
Non-Māori/Non-Pacific	4,809	5,265	9%	5,947	6,976	17%	5,211	6,540	26%	30,396	34,916	15%
Total Population	5,472	6,126	12%	6,751	8,118	20%	5,973	7,702	29%	34,617	40,685	18%

Figure 3: Number of gastrointestinal endoscopy procedures by month, 2018/19 average, 2020, 2021 and 2022 total population and Māori



BRONCHOSCOPY

Notes on data

- Bronchoscopy and CT Lung Biopsy data were extracted from NNPAC and NMDS on 08 Aug 2022.
- These data include bronchoscopies for all indications, not solely cancer related procedures.
- Technical information: bronchoscopies (Purchase Unit Code: MS02003) and CT Lung Biopsy (Procedure codes: 3841808 and 3881200³)

Key points

- May 2022 showed a 30% decrease in the number of bronchoscopies, however there was a notably higher number of bronchoscopies in May 2018/19 to which this is compared. In June there was an overall 3% increase compared to June 2018/19.
- For 2022 to date, there has been a 10% decrease in bronchoscopies, and a 10% increase for Māori, compared with 2018/19.
- For CT lung biopsy for 2022 to date, there was an 11% decrease compared with 2018/19 for the total population and an 8% decrease for Māori.
- Te Aho o Te Kahu has discussed the potential reasons for the overall decrease in bronchoscopy volumes with respiratory physicians in the sector. It has been highlighted that due to the risks of COVID-19 transmission, logistical challenges and other factors, there has been a shift in modes of diagnosis for lung cancer away from bronchoscopy (noting that bronchoscopy is performed for a number of reasons, not just cancer diagnosis). These modes are thought to include Endobronchial Ultrasound Bronchoscopy (EBUS), Positron Emission Tomography - Computed Tomography (PET CT) scans and CT lung biopsy. PET CT and EBUS data are not reported here because the clinical coding of these procedures is not anatomically specific, meaning that we would not know whether they were performed on the lung. CT lung biopsy data were examined and are presented below (figure 5); noting the picture of diagnosis remains incomplete and is therefore difficult to interpret whether any changes in volume of lung cancer diagnostic procedures have occurred. Of note, there has not been a decrease in lung cancer registrations.

³ This report includes an additional procedure code for CT Lung Biopsy (3881200). This is the back mapping code for CT Lung Biopsy prior to July 2019
Te Aho o Te Kahu, Cancer Control Agency

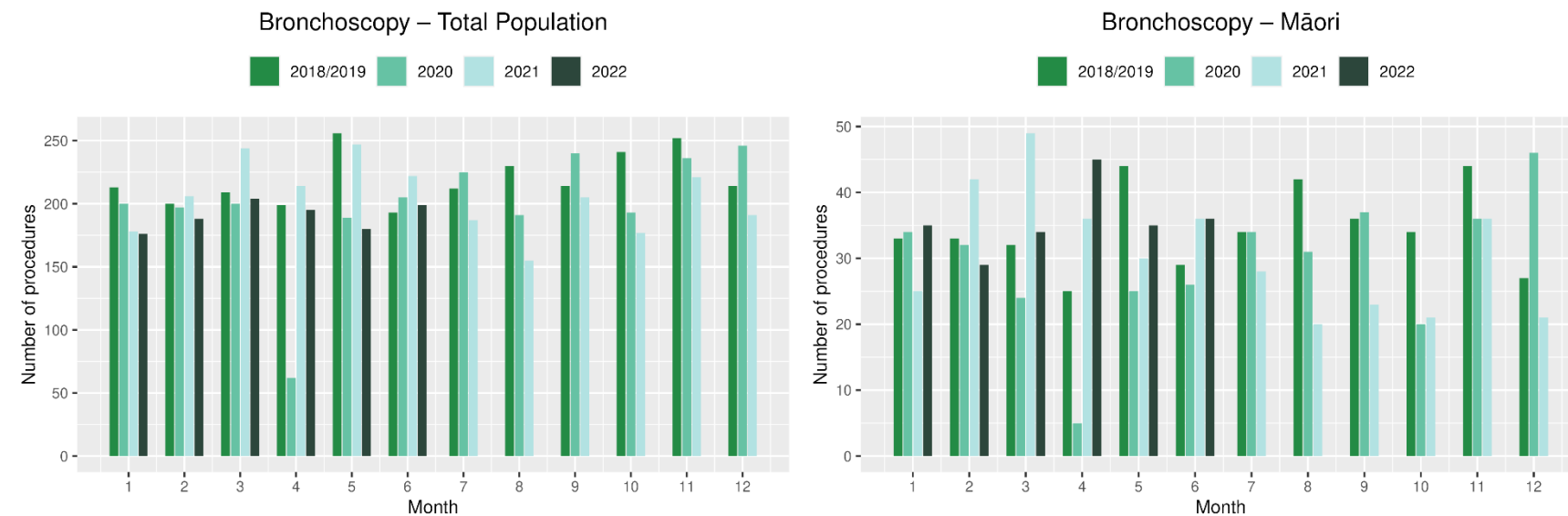
Results

Table 4: Number of bronchoscopies and percentage difference in 2022 compared to the average of 2018 and 2019, by month and cumulative year to date, by ethnicity

	April			May			June			Cumulative January-June		
	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change
Māori	*	*	*	*	*	*	*	*	*	195	214	10%
Pacific Peoples	*	*	*	*	*	*	*	*	*	54	56	5%
Non-Māori/Non-Pacific	166	141	-15%	203	140	-31%	154	150	-3%	1,020	872	-15%
Total Population	199	195	-2%	256	180	-30%	193	199	3%	1,268	1,142	-10%

*Due to small numbers, monthly figures have not been included for Māori and Pacific peoples

Figure 4: Number of bronchoscopies by month, 2018/19 average, 2020, 2021 and 2022, total population and Māori



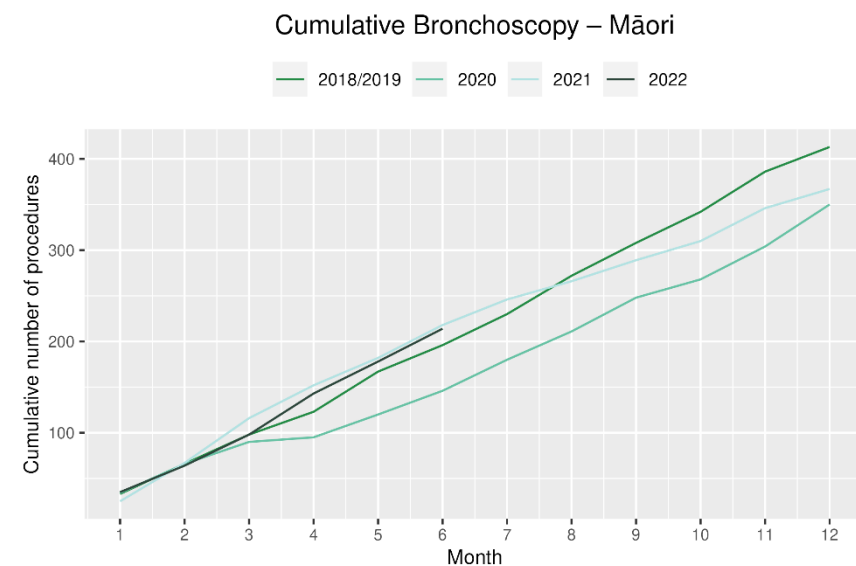
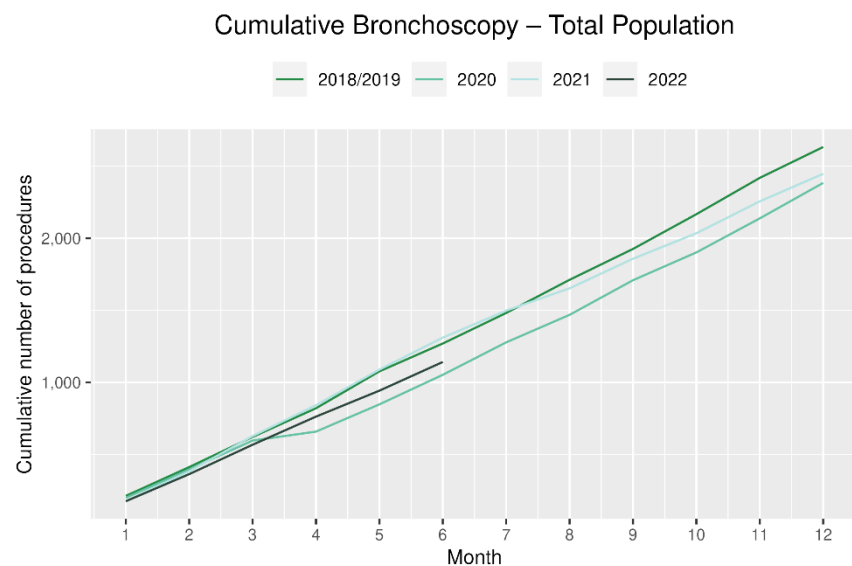
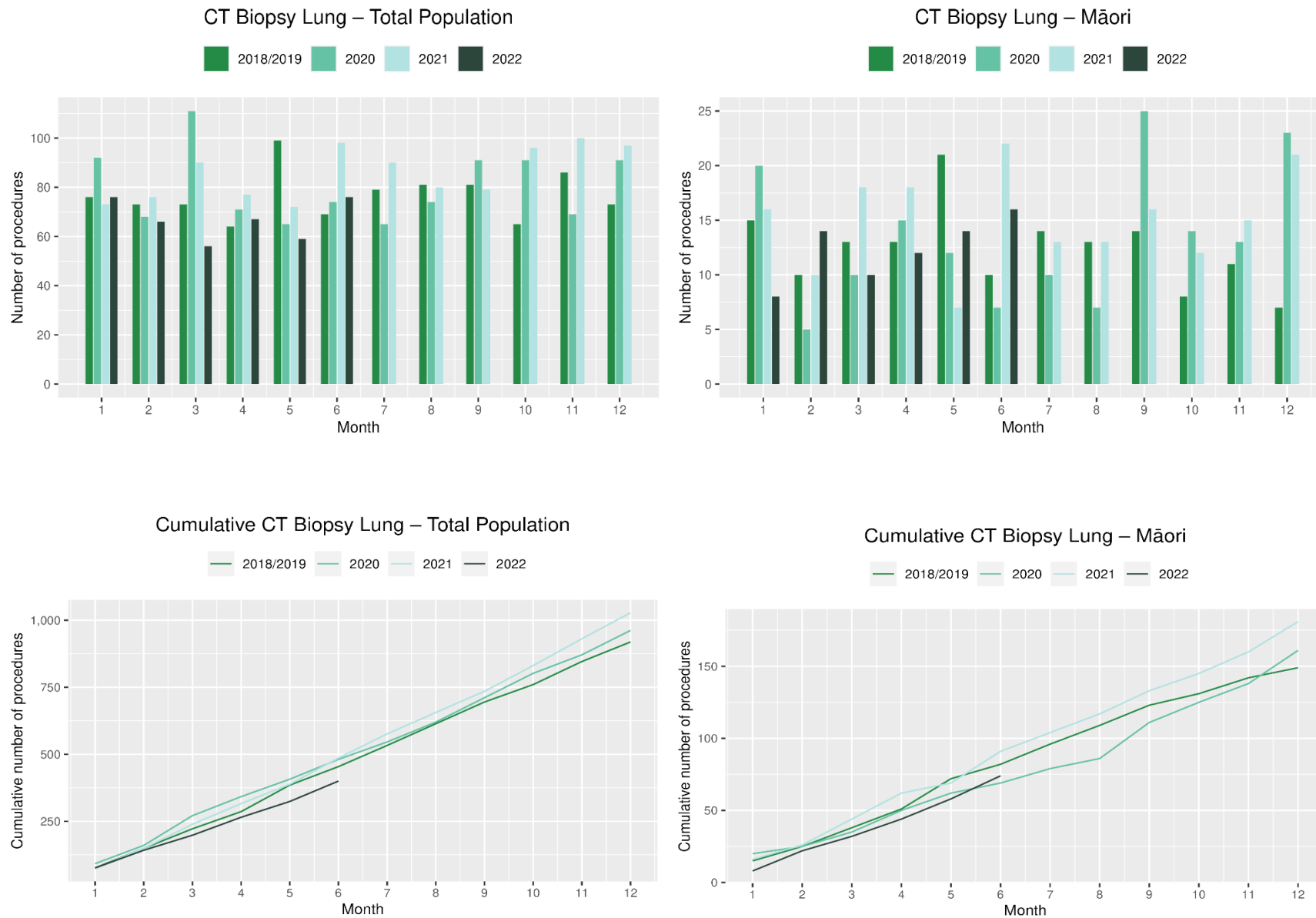


Table 5: Number of CT biopsy and percentage difference in 2022 compared to the average of 2018 and 2019, by month and cumulative year to date, by ethnicity

	April			May			June			Cumulative January-June		
	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change
Māori	*	*	*	*	*	*	*	*	*	81	74	-8%
Pacific Peoples	*	*	*	*	*	*	*	*	*	18	15	-14%
Non-Māori/Non-Pacific	49	49	1%	76	43	-43%	55	57	4%	354	311	-12%
Total Population	64	67	6%	99	59	-40%	69	76	11%	452	400	-11%

Figure 5: Number of CT lung biopsies by month, 2018/19 average, 2020, 2021 and 2022, total population and Māori



FASTER CANCER TREATMENT

Notes on data

- The data were extracted from the Faster Cancer Treatment database on 27 July 2022. Fast Cancer Treatment Data is reported quarterly.
- These data aim to capture a broader part of the diagnostic and referral pathway; however, they only include a subset of people being investigated for cancer.
- Data relate to the 62-day pathway and includes people with a high-suspicion of cancer and a need to be seen within two weeks. This group of people should receive their first treatment within 62-day of receipt of referral. The target is 90% and Te Aho o Te Kahu has an escalation pathway for monitoring the performance of DHBs against the 62-day measure. Escalation includes regular meetings with service teams and CE to CE discussions against recovery planning and actions.
- Analysis includes all referrals onto the 62-day pathway.

Key point

- For 2022 to date, there has been some fluctuation in the proportion of people with a high suspicion of cancer receiving their first treatment within 62 days of receipt of referral, however the measure has been met for 84% of people overall and 86% for Māori.

Results

Table 6: Number of referrals for people with a high suspicion of cancer, in 2022 by month, and cumulative year to date

	January	February	March	April	May	June	Cumulative January-June
Māori	62	56	58	51	64	47	338
Non-Māori/Non-Pacific	296	385	430	300	376	280	2,067
Total Population	380	451	512	376	467	344	2,530

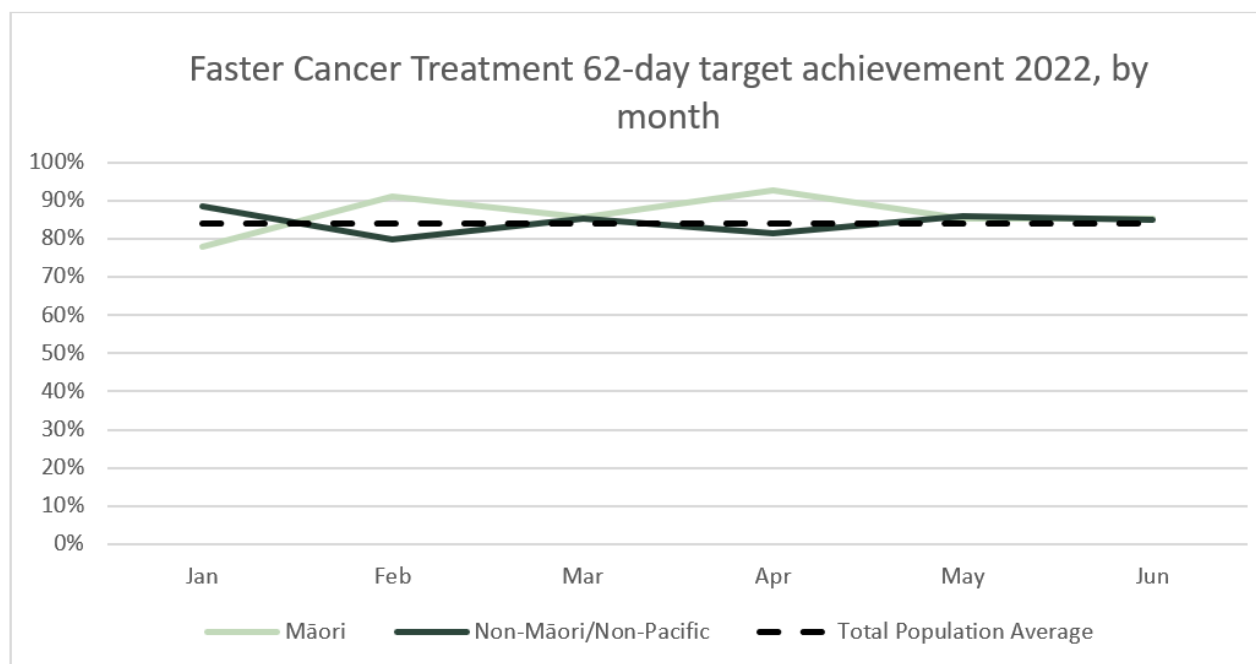
*Due to small numbers, volumes have not been included for Pacific peoples

Table 7: Proportion of people with a high-suspicion of cancer and a need to be seen within 2-weeks who received their first treatment within 62 day of receipt of referral, in 2021 by month, and average for the year to date

	January	February	March	April	May	June	Cumulative January-June
Māori	78%	91%	86%	93%	85%	85%	86%
Non-Māori/Non-Pacific	88%	80%	85%	81%	86%	85%	84%
Total Population	86%	81%	85%	83%	86%	85%	84%

*Due to small numbers, percentages have not been included for Pacific peoples

Figure 6: Proportion of patients with a high-suspicion of cancer and a need to be seen within 2-weeks who received their first treatment within 62 day of receipt of referral, by ethnicity, in 2022 by month



COMBINED CANCER SURGERY

Notes on data

- This report includes data on surgery for breast, colorectal, lung and prostate cancer. These four cancers are therefore used as case studies for cancer surgery more generally.
- Colorectal, lung and prostate cancers were chosen because Te Aho o Te Kahu has a pre-validated list of surgical procedure codes for these cancers, agreed on as part of the quality performance indicator (QPI) work programme.
- For breast cancer, as the development of QPIs are currently underway, we have been able to provide provisional surgical procedure codes for the purposes of this report.
- The surgical procedure codes are listed in Appendix 5.
- The data were extracted from the NMDS on 8 Aug 2022.

Key points

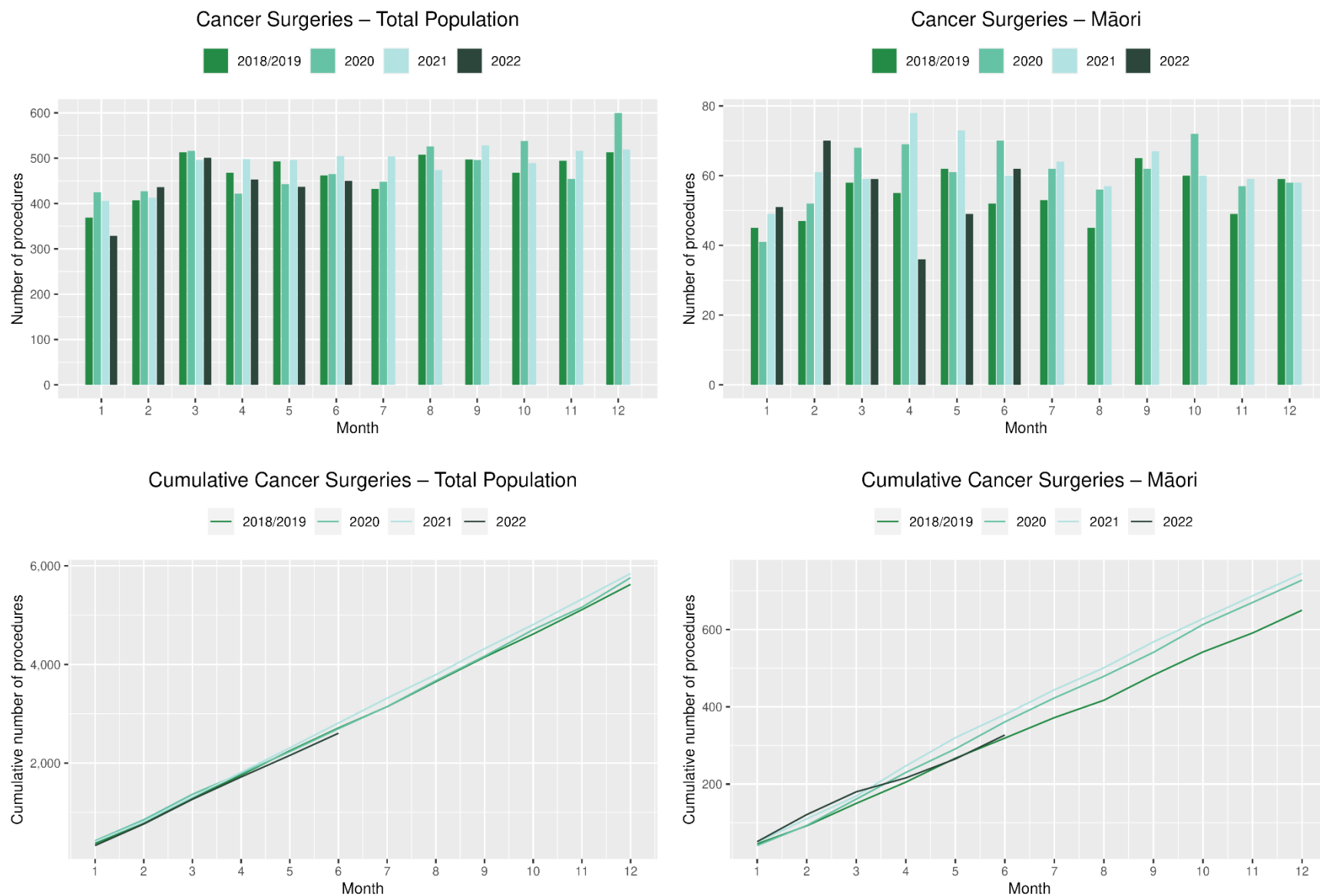
- In May 2022, there were 11% fewer cancer surgeries (breast, prostate, lung and colorectal combined) compared to May 2018/19. In June 2022, there were 3% fewer cancer surgeries compared to June 2018/19. For 2022 to date there were 4% fewer surgeries performed compared to 2018/19.
- For Māori, there has been a 3% increase in combined cancer surgeries for the year to date relative to 2018/19 (reflecting 10 more surgeries).
- For Pacific peoples there was a 25% increase for the year to date relative to 2018/19 (reflecting 25 more surgeries).

Results

Table 8: Number of cancer surgeries (breast, prostate, colorectal, lung) and percentage difference in 2022 compared to the average of 2018 and 2019, by month and cumulative year to date, by ethnicity

	April			May			June			Cumulative January-June		
	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change
Māori	55	36	-34%	62	49	-20%	52	62	19%	317	327	3%
Pacific Peoples	22	30	40%	21	25	19%	19	21	11%	102	127	25%
Non-Māori/Non-Pacific	392	387	-1%	410	363	-11%	391	367	-6%	2,292	2,152	-6%
Total Population	468	453	-3%	493	437	-11%	462	450	-3%	2,711	2,606	-4%

Figure 7: Number of cancer surgeries (breast, prostate, colorectal, lung) by month, 2018/19 average, 2020, 2021 and 2022, total population and Māori



BREAST CANCER SURGERY (MASTECTOMY)

Notes on data

- A list of the surgical procedure codes used for analysis are included in Appendix 5.
- The data were extracted from the NMDS on 8 Aug 2022.
- The number of mastectomies performed each month is relatively small, so caution is needed when comparing data by month.
- Procedure codes for mastectomy only are included in this report. There are a number of additional procedure codes used for breast cancer surgeries in addition to mastectomy, however the procedure codes for these surgeries are less specific for cancer. Therefore, using only mastectomy codes allows a more accurate view of any changes in breast cancer surgery volumes⁴.

Key points

- There were 15% fewer mastectomies performed in May 2022 compared with May 2018/19 and a 1% increase in June 2022 compared with 2018/19.
- For 2022 to date, there has been a 5% decrease in mastectomies in 2022 compared with 2018/19.

Results

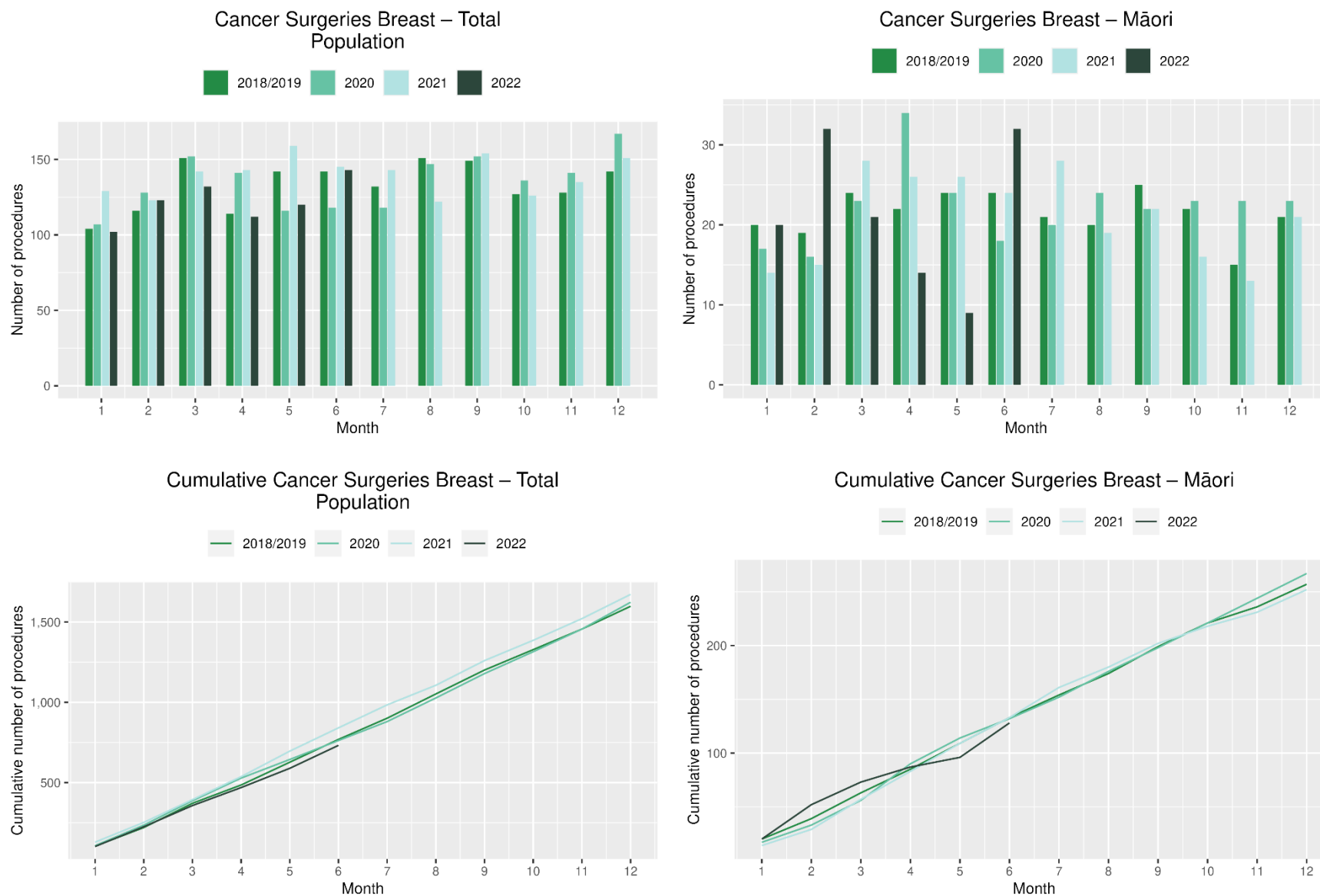
Table 9: Number of mastectomies and percentage difference in 2022 compared to the average of 2018 and 2019, by month and cumulative year to date, by ethnicity

	April			May			June			Cumulative January-June		
	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change
Māori	*	*	*	*	*	*	*	*	*	*	*	*
Pacific Peoples	*	*	*	*	*	*	*	*	*	*	*	*
Non-Māori/Non-Pacific	83	89	7%	109	101	-7%	111	101	-9%	590	548	-7%
Total Population	114	112	-1%	142	120	-15%	142	143	1%	768	732	-5%

*Due to small numbers, some figures have not been included for Māori and Pacific peoples

⁴ We recognise there are limitations to this approach and aim to strike a balance between timely data availability, completeness, and accuracy, with the purpose of the reporting being to provide an initial indication of the current situation which may then require further interrogation at a regional level.

Figure 8: Number of mastectomies by month, 2018/19 average, 2020, 2021 and 2022, total population and Māori



COLORECTAL CANCER SURGERY

Notes on data

- The surgical procedure codes used for analysing colorectal cancer are listed in Appendix 5.
- The data were extracted from the NMDS on 8 Aug 2022.

Key points

- There were 17% fewer colorectal cancer surgeries performed in May 2022 compared with May 2018/19 and 7% fewer in June 2022.
- For 2022 to date, there were 8% fewer colorectal cancer surgeries performed in total, 22% increase for Pacific peoples (noting small numbers) and a 18% increase for Māori compared with 2018/19.

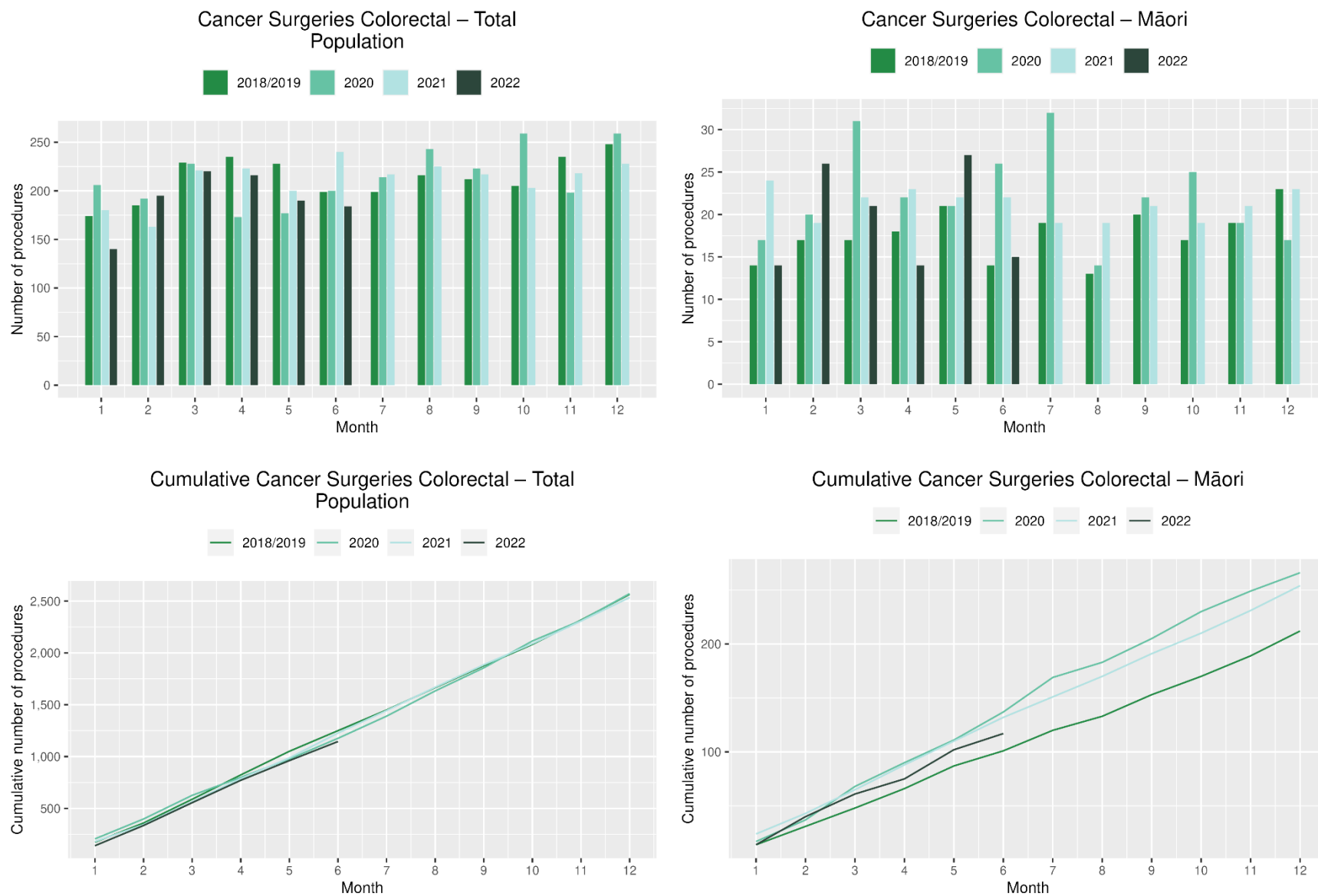
Results

Table 10: Number of colorectal cancer surgeries and percentage difference in 2022 compared to the average of 2018 and 2019, by month and cumulative year to date, by ethnicity

	April			May			June			Cumulative January-June		
	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change
Māori	18	14	-22%	*	*	*	*	*	*	100	117	18%
Pacific Peoples	10	15	50%	*	*	*	*	*	*	35	42	22%
Non-Māori/Non-Pacific	207	187	-10%	202	154	-24%	178	163	-8%	1,114	986	-11%
Total Population	235	216	-8%	228	190	-17%	199	184	-7%	1,248	1,145	-8%

*Due to small numbers, monthly figures have not been included for Māori and Pacific peoples

Figure 9: Number of colorectal cancer surgeries by month, 2018/19 average, 2020, 2021 and 2022, total population and Māori



LUNG CANCER SURGERY

Notes on data

- A list of the surgical procedure codes used for analysis are included in Appendix 5.
- The data were extracted from the NMDS on 8 Aug 2022.
- The number of lung cancer surgeries performed each month is relatively small, so caution is needed when comparing data by month.

Key points

- There was a 6% increase in the number of lung cancer surgeries performed in May and for June 2022 compared with the same months in 2018/19.
- For 2022 to date there was a 2% increase in the number of surgeries performed for the total population.
- For Māori there was a 25% decrease in lung cancer surgery, numbering 16 fewer surgeries in 2022 compared with 2018/19. For Pacific peoples there was a 48% increase, numbering 6 more surgeries.

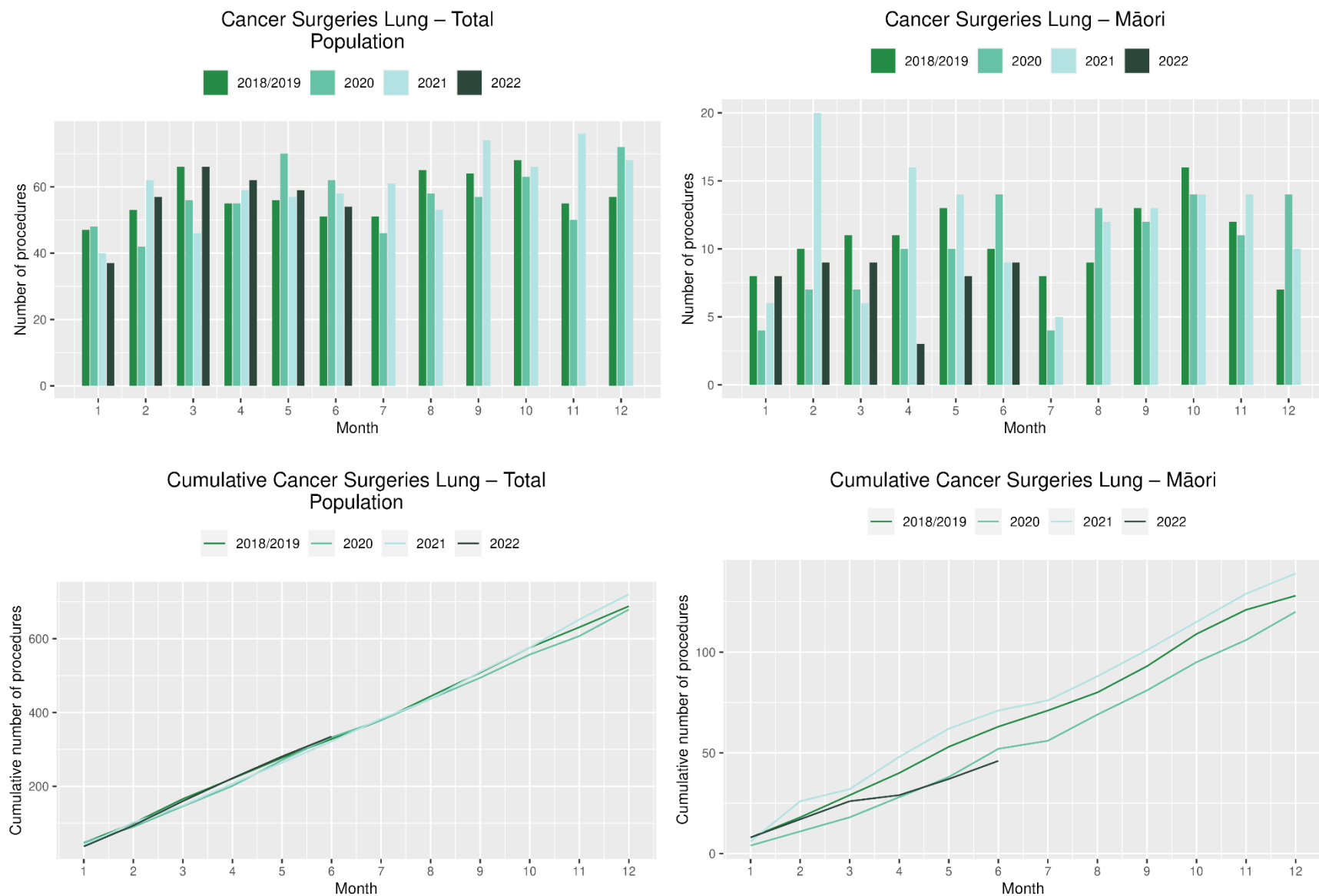
Results

Table 11: Number of lung cancer surgeries and percentage difference in 2022 compared to the average of 2018 and 2019, by month and cumulative year to date, by ethnicity

	April			May			June			Cumulative January-June		
	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change
Māori	*	*	*	*	*	*	*	*	*	62	46	-25%
Pacific Peoples	*	*	*	*	*	*	*	*	*	14	20	48%
Non-Māori/Non-Pacific	41	56	37%	41	45	11%	38	42	11%	252	269	7%
Total Population	55	62	14%	56	59	6%	51	54	6%	327	335	2%

* Due to small numbers, monthly figures have not been included for Māori and Pacific peoples

Figure 10: Number of lung cancer surgeries by month, 2018/19 average, 2020, 2021 and 2022, total population and Māori



PROSTATE CANCER SURGERY

Notes on data

- A list of the surgical procedure codes used for analysis are included in Appendix 5.
- The data was extracted from the NMDS on 08 Aug 2022.
- The number of prostate cancer surgeries performed each month is relatively small, so caution is needed when comparing data by month.

Key points

- There was a 1% increase in prostate cancer surgeries performed in May 2022 compared with May 2018/19 and a 4% decrease for the month of June.
- For 2022 to date there were 7% more prostate cancer surgeries compared with cumulative figures from 2018/19.

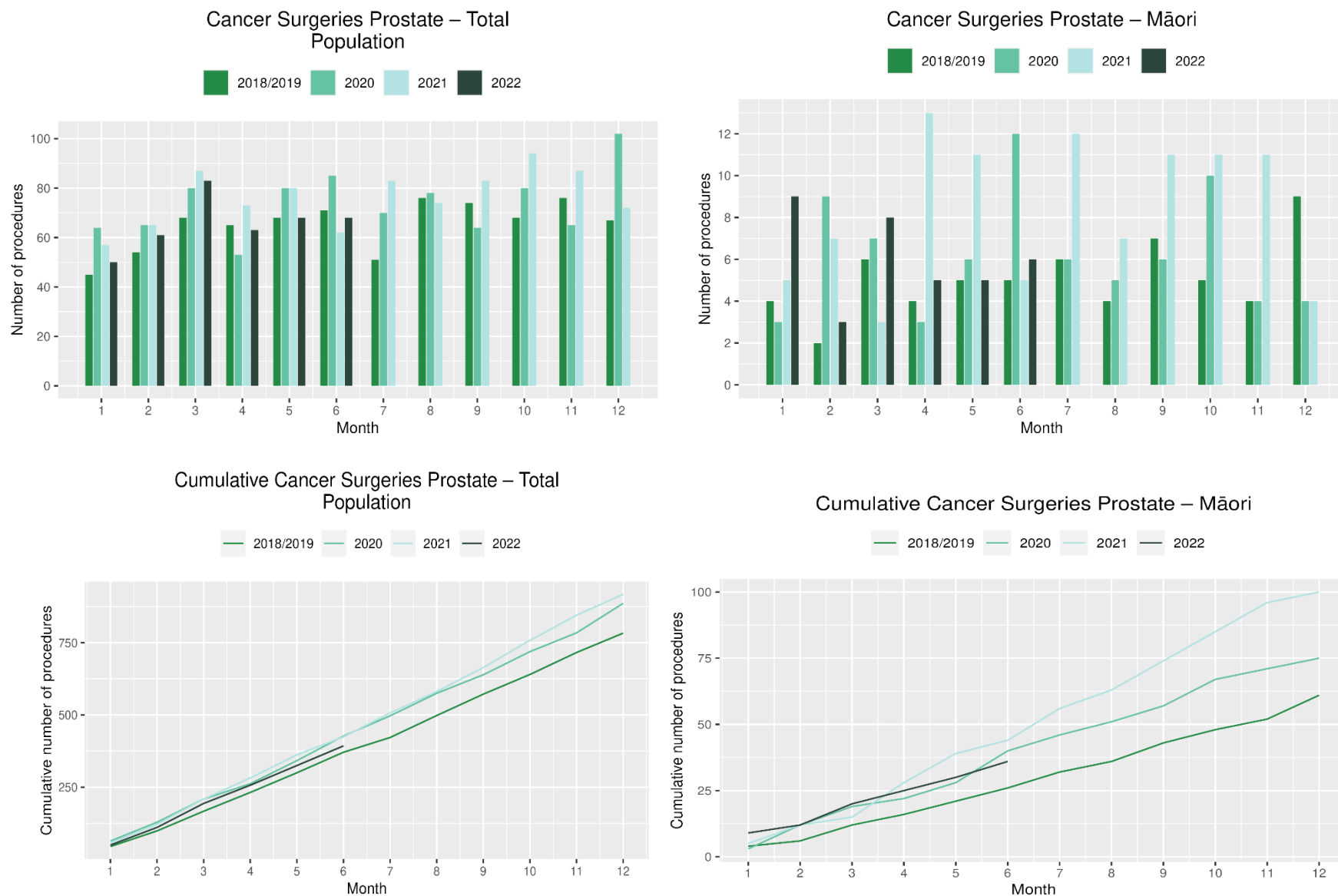
Results

Table 12: Number of prostate cancer surgeries and percentage difference in 2022 compared to the average of 2018 and 2019 by month and cumulative year to date

	April			May			June			Cumulative January-June		
	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change
Māori	*	*	*	*	*	*	*	*	*	*	*	*
Pacific Peoples	*	*	*	*	*	*	*	*	*	*	*	*
Non-Māori/Non-Pacific	61	55	-9%	60	63	6%	65	60	-7%	337	348	3%
Total Population	65	63	-2%	68	68	1%	71	68	-4%	368	393	7%

*Due to small numbers, some figures have not been included for Māori and Pacific peoples

Figure 11: Number of prostate cancer surgeries by month, 2018/19 average, 2020,2021 and 2022, total population and Māori



MEDICAL ONCOLOGY

Notes on data

- Data were extracted from NNPAAC on 8 Aug 2022.
- First specialist assessment (FSA) reflects counts of first attendance for specialist medical oncology assessment.
- Intravenous (IV) chemotherapy reflects appointments for outpatient and inpatient IV chemotherapy for non-haematological indications.
- Technical information: medical oncology FSA (Purchase Unit Code: M50020) and IV chemotherapy (Purchase Unit Code: MS02009).

Key points

- Attendances for medical oncology first specialist assessments (FSAs) showed a 2% increase in May 2022 compared to May 2018/19 and a 12% increase in June. For Māori, there was a 4% increase in FSAs in May 2022 compared to May 2018/19 and a 7% decrease in June.
- For 2022 to date, there was an overall 8% increase in medical oncology FSAs compared with 2018/19 and a 12% increase for Māori.
- Attendances for intravenous (IV) chemotherapy increased by 3% in May 2022 compared to May 2018/19 and increased by 17% in June. For Māori, there was a 29% increase in IV chemotherapy in May 2022 compared to May 2018/19 and increased by 39% in June.
- For 2022 to date, there was a 10% increase in IV chemotherapy compared with 2018/19 overall and a 34% increase for Māori.

Results

Table 13: Number of medical oncology first specialist assessments and percentage difference in 2022 compared to the average of 2018 and 2019, by month and cumulative year to date, by ethnicity

	April			May			June			Cumulative January -June		
	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change
Māori	94	101	8%	112	116	4%	109	101	-7%	593	662	12%
Pacific Peoples	35	35	1%	48	53	10%	31	47	52%	202	251	25%
Non-Māori/Non-Pacific	544	544	0%	723	727	1%	556	629	13%	3,590	3,842	7%
Total Population	672	680	1%	883	896	2%	695	777	12%	4,385	4,755	8%

Figure 12: Number of medical oncology first specialist assessments by month, 2018/19 average, 2020, 2021 and 2022, total population and Māori

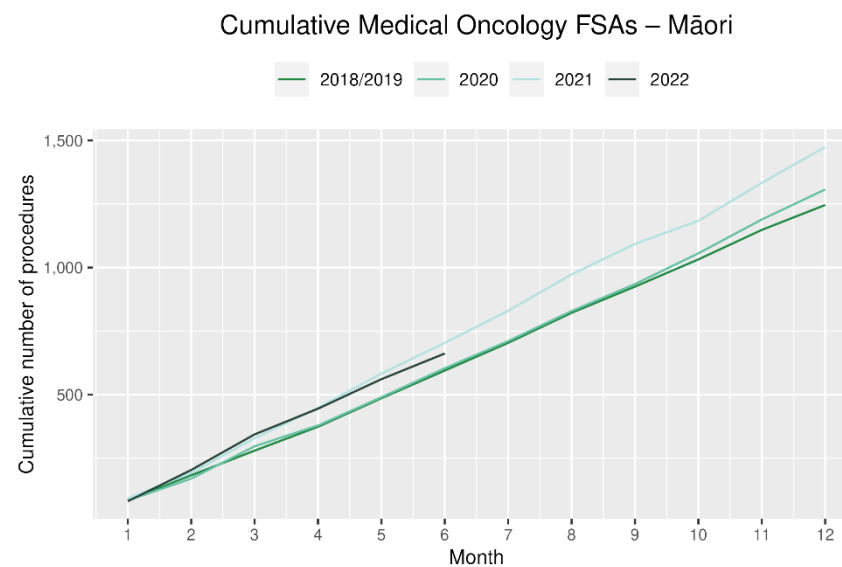
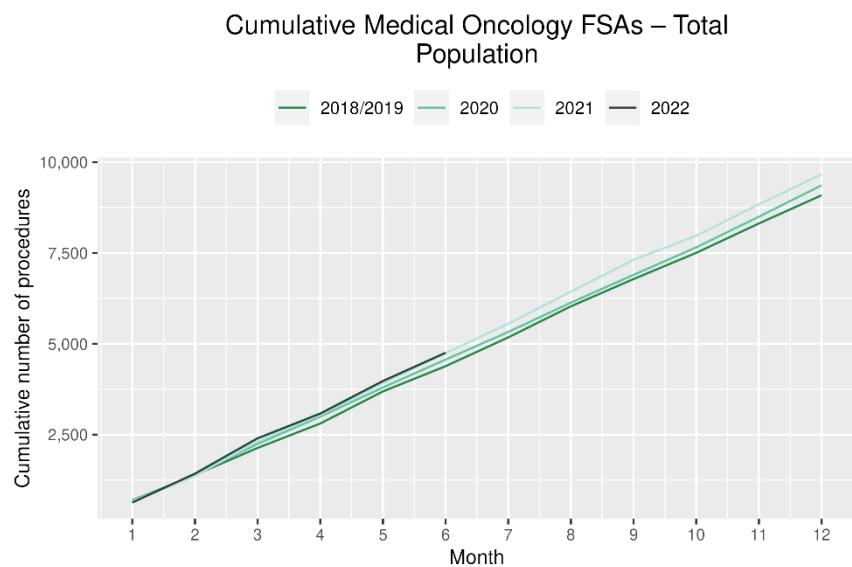
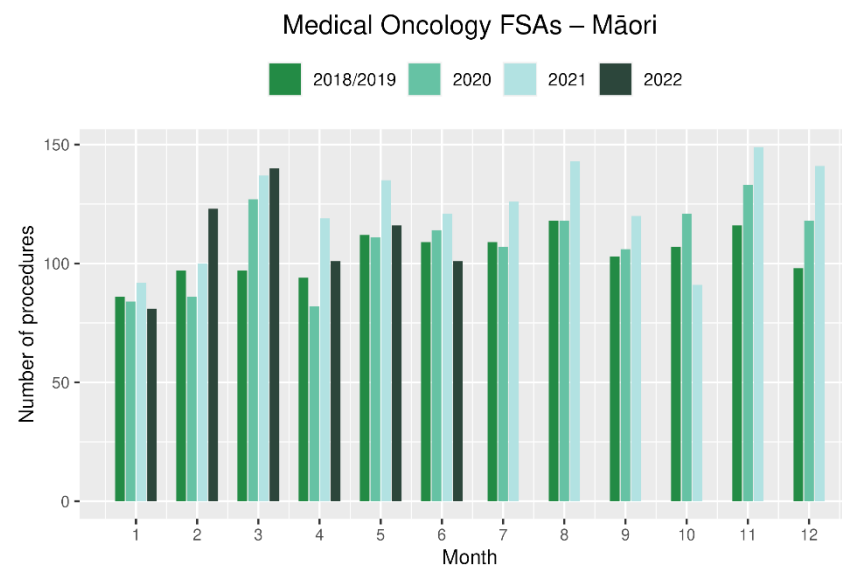
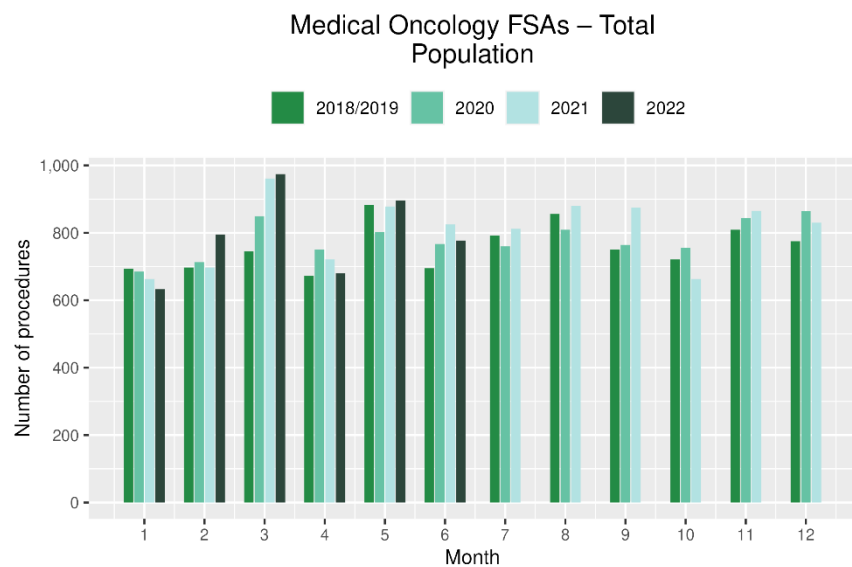


Table 14: Number of IV chemotherapy attendances and percentage difference in 2022 compared to the average of 2018 and 2019, by month and cumulative year to date, by ethnicity

	April			May			June			Cumulative January -June		
	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change
Māori	674	930	38%	756	973	29%	682	945	39%	4,209	5,651	34%
Pacific Peoples	275	344	25%	293	397	35%	253	401	58%	1,598	2,215	39%
Non-Māori/Non-Pacific	4,753	4,941	4%	5,400	5,265	-3%	4,628	5,162	12%	28,909	30,479	5%
Total Population	5,701	6,215	9%	6,449	6,635	3%	5,563	6,508	17%	34,715	38,345	10%

Figure 13: Number of IV chemotherapy attendances by month, 2018/19 average, 2020 and 2021, total population and Māori

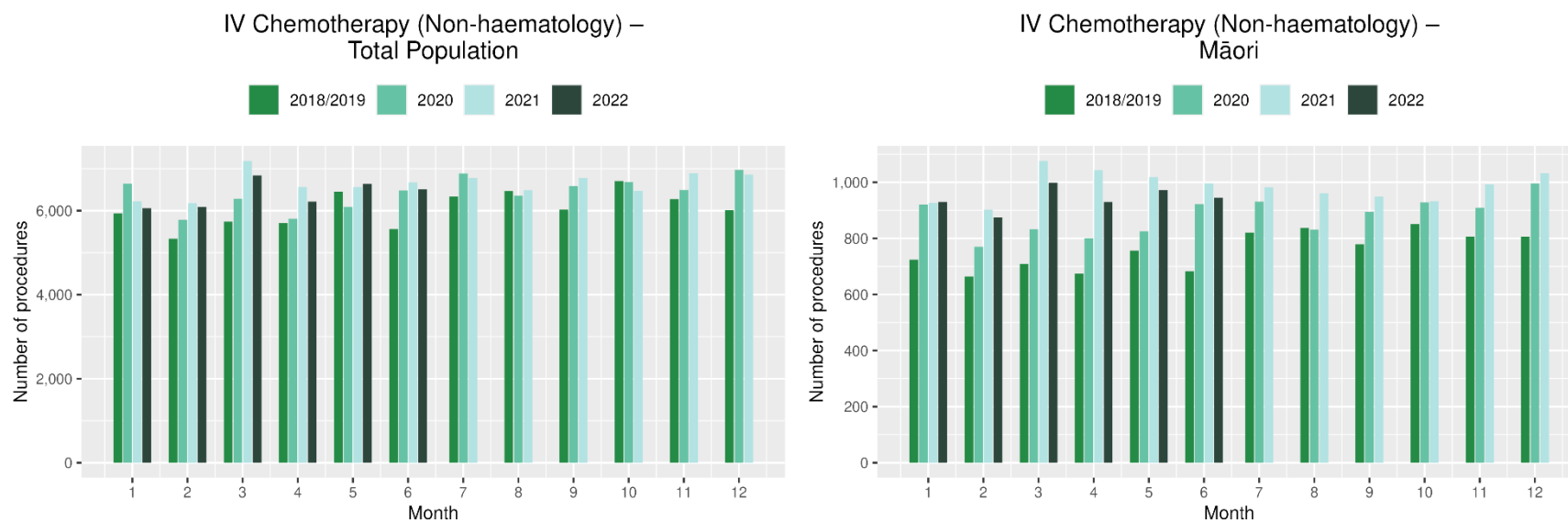
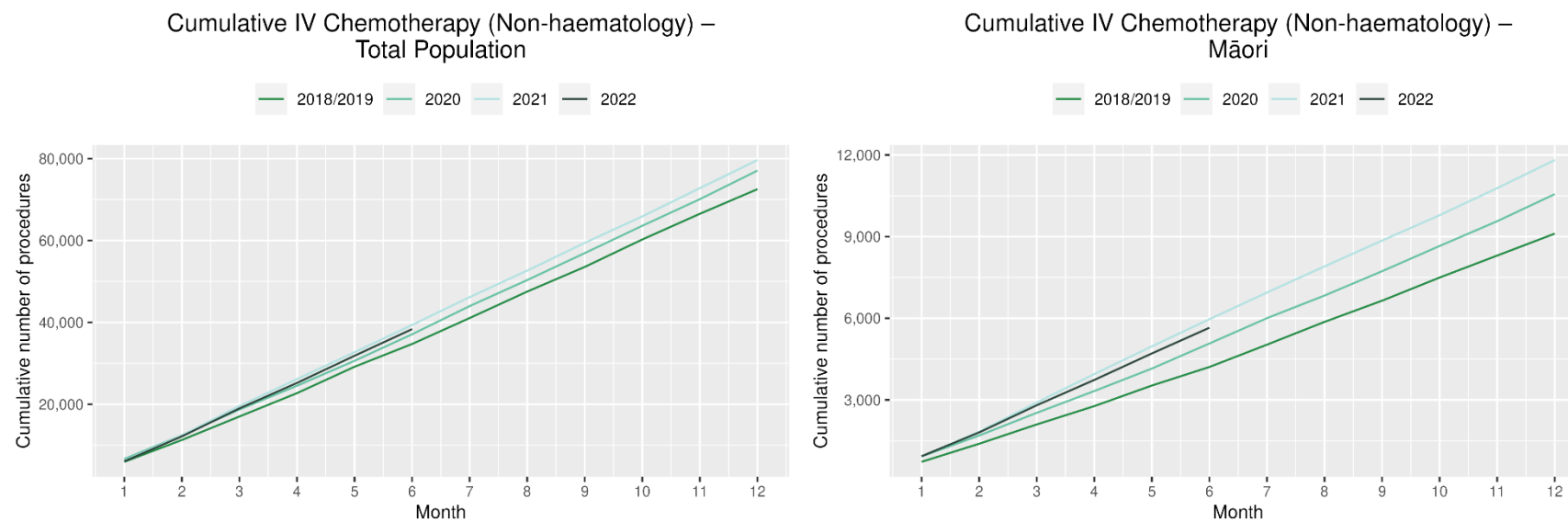


Figure 14: Cumulative number of attendances for IV chemotherapy, 2018/19 average, 2020 and 2021, total population and Māori



RADIATION ONCOLOGY

Notes on data

- Radiation oncology first specialist assessments and megavoltage attendances data were extracted from NNPAC on 8 Aug 2022.
- First specialist assessment (FSA) reflects counts of first attendance for radiation oncology specialist assessment.
- Radiation therapy attendances include appointments for planning/simulation and for treatment with radiation therapy on a linear accelerator.
- Radiation therapy courses data were extracted from Radiation Oncology Collection (ROC) on 18 Aug 2022. ROC is a national collection that contains diagnosis and treatment data for patients receiving radiation therapy from both the public and private providers. ROC is updated quarterly.
- A course of radiation therapy is a set of radiotherapy treatment(s) to a continuous or contiguous volume with a single intent from a single referral. A course can include multiple phases and multiple radiotherapy modalities. The monthly data here refers to the number of completed courses. The course starting date may not be in the same month.
- Radiation therapy course data reflect *completed* radiation therapy courses. This measure likely reflects trends in service volume over time better than radiation therapy attendance, as the increased use of hypofractionation⁵ is likely to contribute to a decrease in the number of attendances required to complete a course of treatment.
- Technical information: radiation oncology FSA (Purchase Unit Code: M50022), megavoltage attendances (Purchase Unit Code: M50025).

Key points

- Attendances for radiation oncology first specialist assessments (FSAs) increased by 6% in May 2022 compared to May 2018/19 and increased by 1% in June 2022. For Māori, there was a 23% increase in FSAs in May 2022 compared to May 2018/19 (note the previous month decrease) and for June 2022 there was a 2% increase.
- For 2022 to date, there was a 5% increase in radiation oncology FSAs compared with 2018/19, with a 12% increase for Māori over this time period.
- Radiation therapy attendances decreased by 18% in May 2022 compared to May 2018/19 and decreased by 7% in June 2022. For Māori, there was a 9% decrease in radiation therapy attendances in May 2022 compared to May 2018/19 and a 13% decrease in June 2022. For Pacific peoples there was a 17% decrease in radiation therapy attendances in May 2022 compared to May 2018/19 and a 3% increase in June 2022.
- For 2022 to date, there was an 11% decrease in radiation therapy attendances overall and a 3% decrease for Māori.
- Completed radiation therapy courses decreased by 6% in May 2022 compared to May 2018/19 and decreased by 11% in June 2022.
- For 2022 to date, there was a decrease of 7% in completed radiation therapy courses and an increase of 3% for Māori.

⁵ Hypofractionation is a radiation treatment technique used to treat some cancers, whereby larger doses of radiation are given each treatment, meaning that patients require fewer sessions to complete their treatment. The technique is being increasingly used for some prostate and breast cancers in New Zealand and around the world.

Table 15: Number of radiation oncology first specialist assessments and percentage difference in 2022 compared to the average of 2018 and 2019, by month and cumulative year to date, by ethnicity

	April			May			June			Cumulative January -June		
	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change
Māori	112	99	-12%	129	158	23%	115	117	2%	673	753	12%
Pacific Peoples	38	49	29%	53	61	15%	52	64	23%	272	325	19%
Non-Māori/Non-Pacific	741	757	2%	955	988	4%	782	778	0%	4,890	5,067	4%
Total Population	891	905	2%	1,136	1,207	6%	949	959	1%	5,835	6,145	5%

Figure 15: Number of radiation oncology first specialist assessments by month, 2018/19 average, 2020, 2021 and 2022, total population and Māori

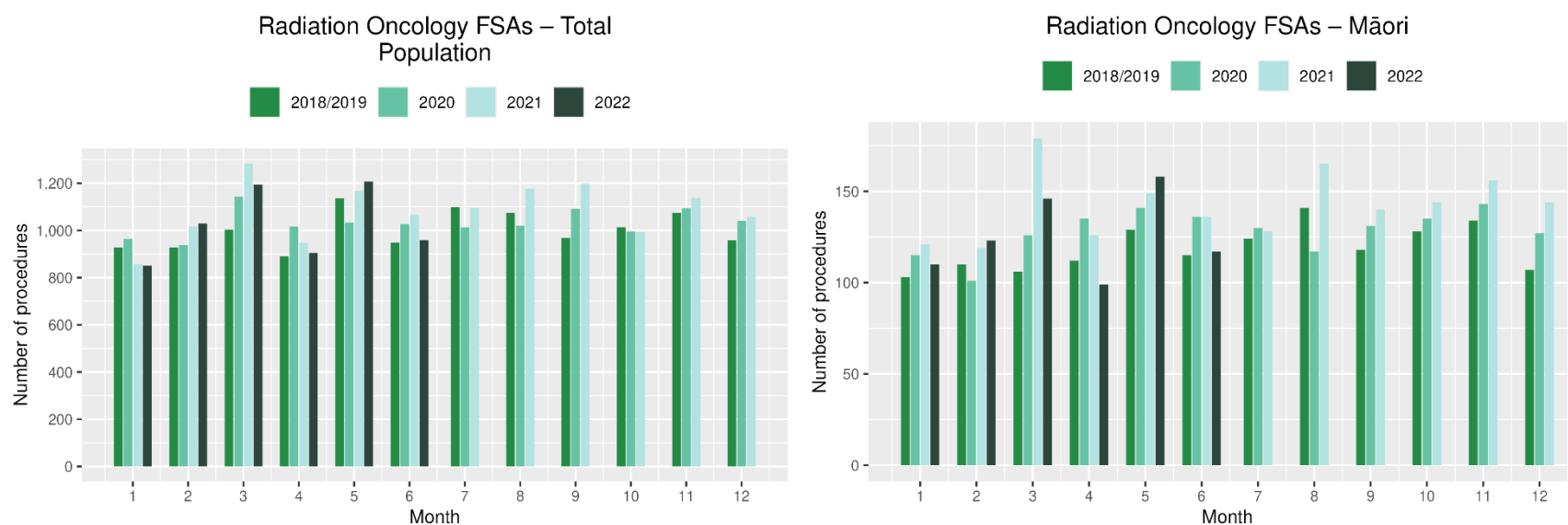


Figure 16: Cumulative number of radiation oncology first specialist assessments by month, 2018/19 average, 2020, 2021 and 2022, total population and Māori

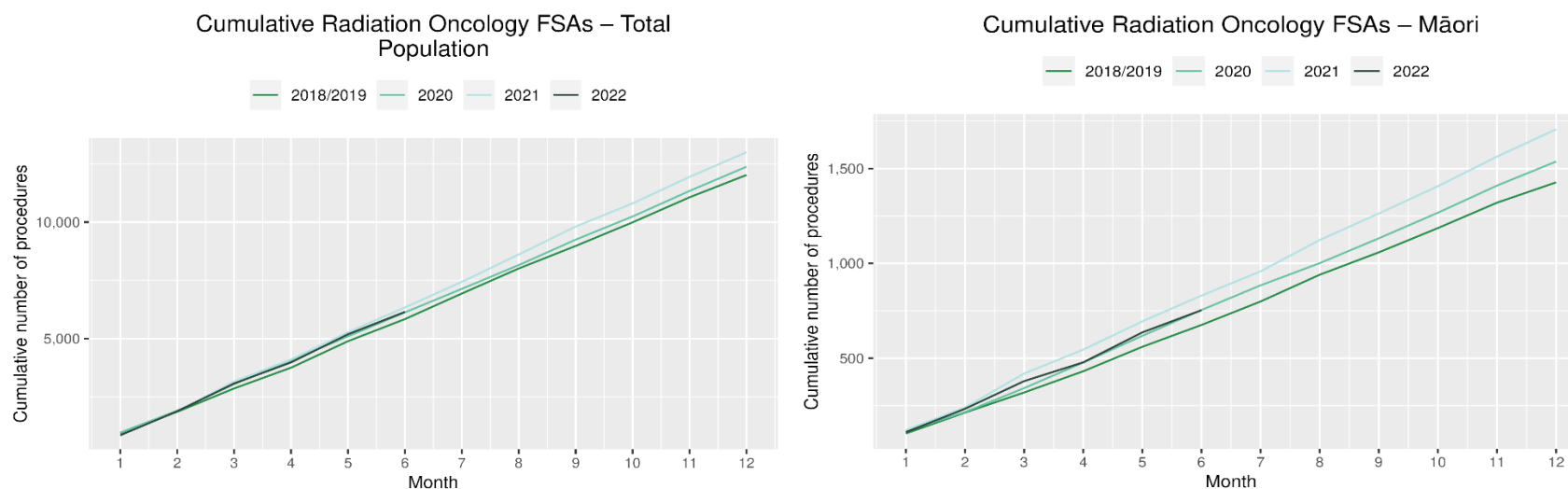


Table 16: Number of radiation therapy attendances and percentage difference in 2022 compared to the average of 2018 and 2019, by month and cumulative year to date, by ethnicity

	April			May			June			Cumulative January -June		
	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change
Māori	1,711	1,564	-9%	1,897	1,726	-9%	1,729	1,496	-13%	10,285	10,002	-3%
Pacific Peoples	535	417	-22%	730	605	-17%	565	581	3%	3,361	3,045	-9%
Non-Māori/Non-Pacific	11,111	9,464	-15%	13,344	10,814	-19%	11,162	10,383	-7%	69,498	60,560	-13%
Total Population	13,357	11,445	-14%	15,970	13,145	-18%	13,455	12,460	-7%	83,144	73,607	-11%

Figure 17: Number of radiation therapy attendances by month, 2018/19 average, 2020, 2021 and 2022, total population and Māori

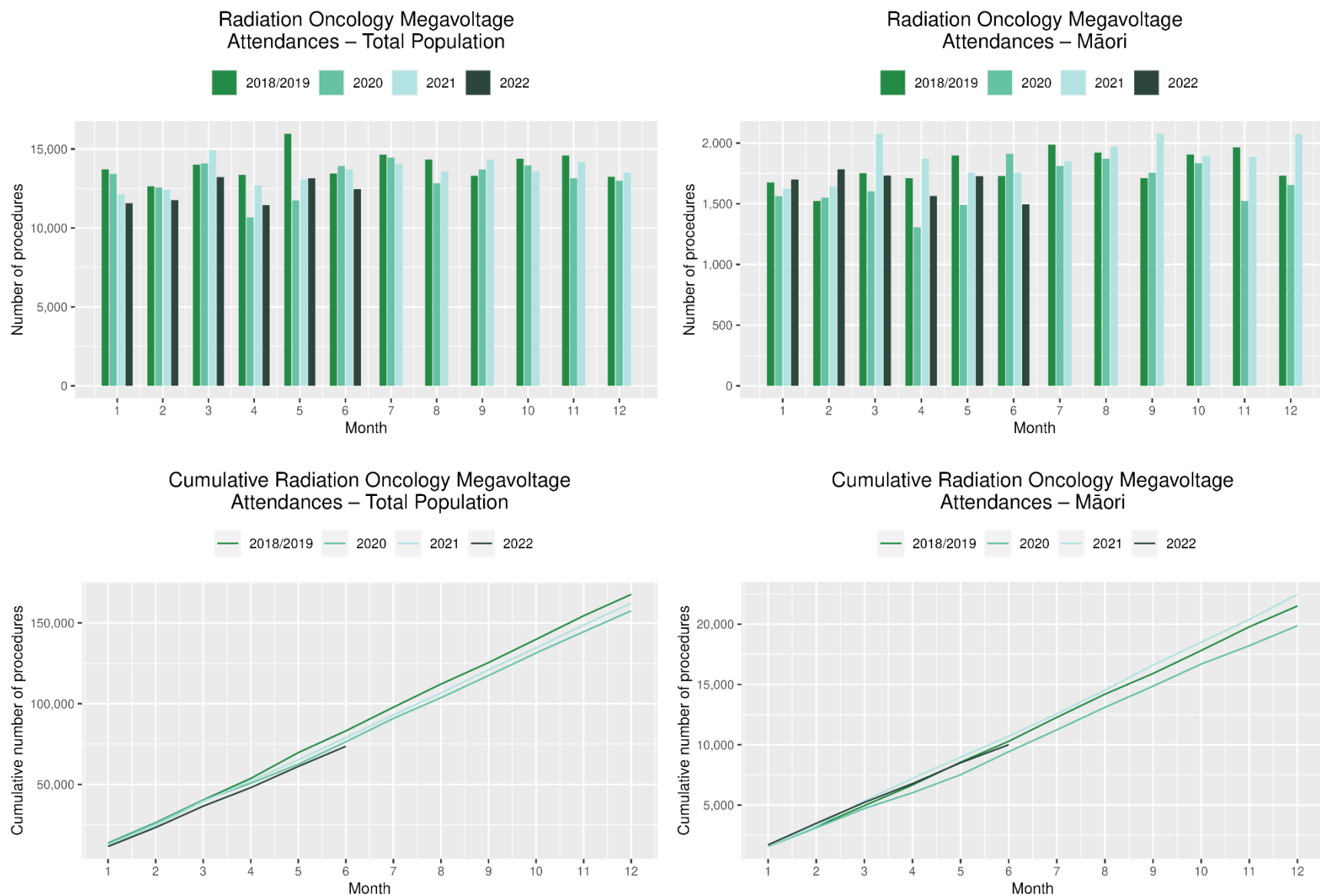
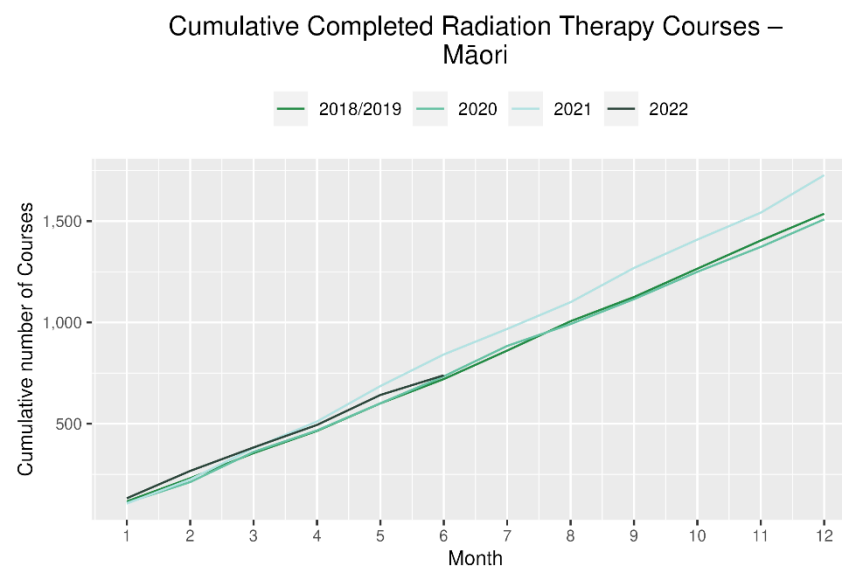
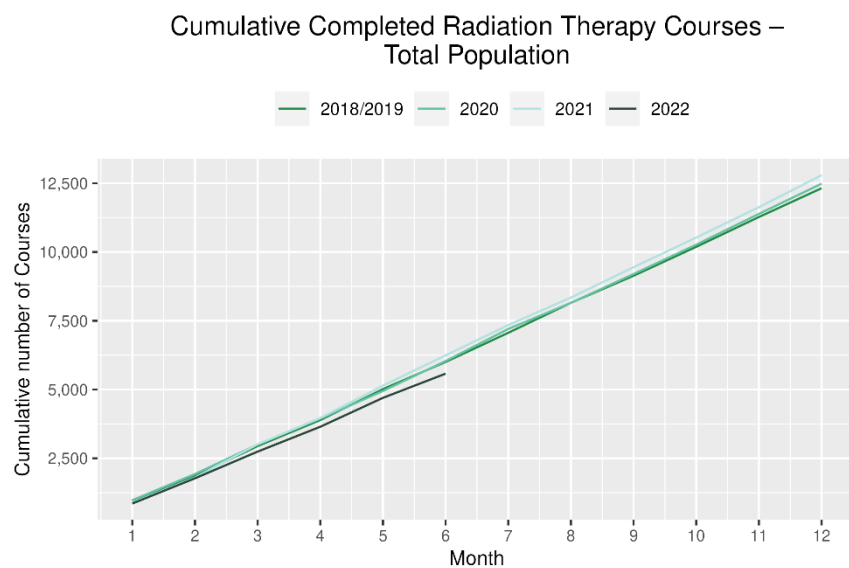
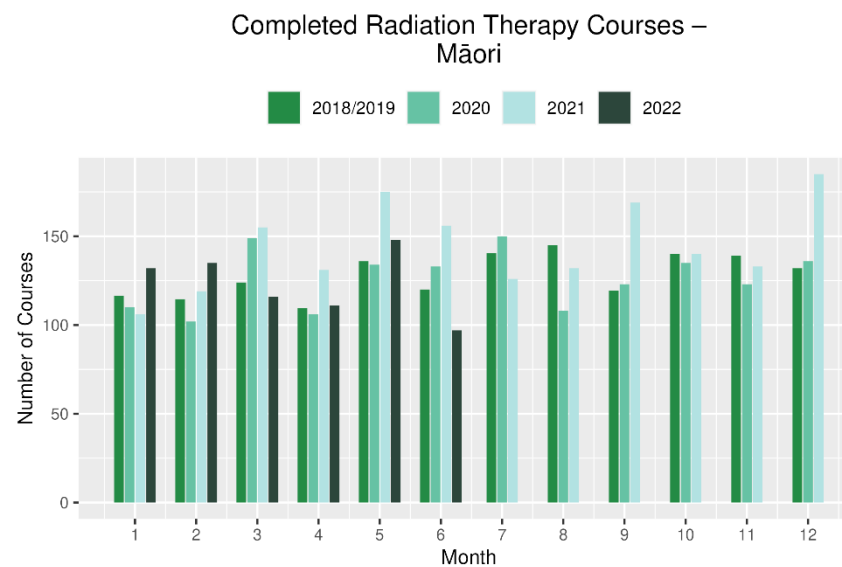
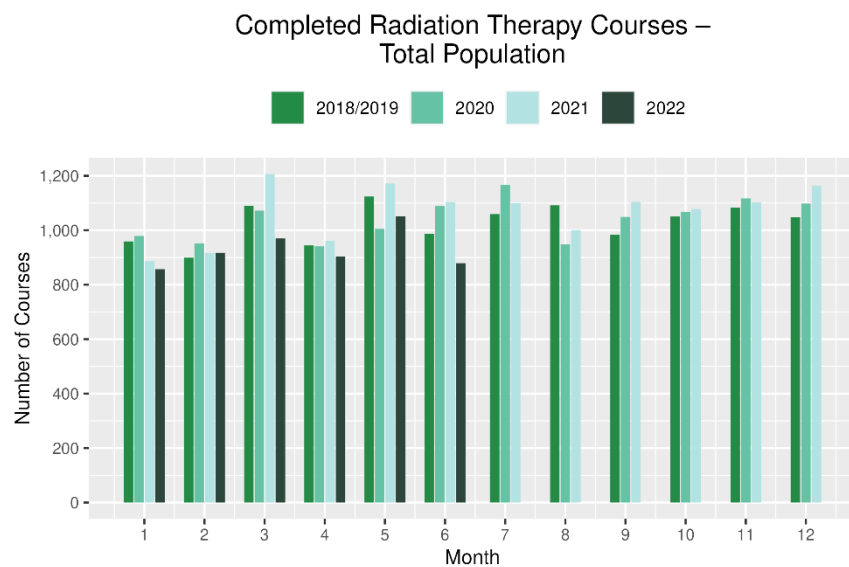


Table 17: Number of completed radiation therapy courses and percentage difference in 2022 compared to the average of 2018 and 2019, by month and cumulative year to date, by ethnicity

	April			May			June			Cumulative January-June		
	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change
Māori	110	111	1%	136	148	9%	120	97	-19%	721	739	3%
Pacific Peoples	44	38	-14%	53	48	-9%	36	37	4%	246	236	-4%
Non-Māori/Non-Pacific	791	755	-4%	935	855	-9%	832	745	-10%	5,037	4,603	-9%
Total Population	944	904	-4%	1,124	1,051	-6%	988	879	-11%	6,004	5,578	-7%

Figure 20: Number of completed radiation therapy courses by month, 2018/19 average, 2020, 2021 and 2022, total population and Māori



HAEMATOLOGY

Notes on data

- Data were extracted from NNPAC and NMDS on 8 Aug 2022.
- First specialist assessment (FSA) reflects counts of first attendance for specialist haematology assessment for any indication, not just cancer.
- IV chemotherapy reflects appointments for IV chemotherapy for haematological malignancies.
- Technical information: Haematology FSA (Purchase Unit Code: M30002), IV haem/chemo (Purchase Unit Code: M30020).

Key points

- There was a 11% decrease in attendances for haematology first specialist assessments (FSAs) in May 2022 compared to May 2018/19 and a 3% increase in June 2022. For Māori, there was a 17% increase in FSAs May 2022 compared to May 2018/19 and a 7% decrease in June.
- For 2022 to date, there was a 5% decrease in haematology FSAs compared with 2018/19, and for Māori there was a 1% increase.
- Attendances for haematology intravenous (IV) chemotherapy increased by 3% in May 2022 compared to May 2018/19 and a 17% increase in June 2022. For Māori, there was an 2% increase in haematology IV chemotherapy in May 2022 compared to May 2018/19 and a 32% increase in June 2022. For Pacific peoples there was a 4% increase in IV chemotherapy in May 2022 compared to May 2018/19 and a 10% increase in June 2022.
- For 2022 to date, there was a 13% increase in haematology IV chemotherapy compared with 2018/19 overall and for Māori.

Results

Table 18: Number of haematology first specialist assessment attendances and percentage difference in 2022 compared to the average of 2018 and 2019, by month and cumulative year to date, by ethnicity

	April			May			June			Cumulative January -June		
	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change
Māori	49	43	-12%	63	74	17%	62	57	-7%	331	335	1%
Pacific Peoples	23	25	9%	33	38	17%	29	29	2%	160	197	24%
Non-Māori/Non-Pacific	427	366	-14%	564	475	-16%	404	423	5%	2,727	2,534	-7%
Total Population	499	434	-13%	659	587	-11%	494	509	3%	3,217	3,066	-5%

Figure 18: Number of haematology first specialist assessments by month, 2018/19 average, 2020, 2021 and 2022, total population and Māori

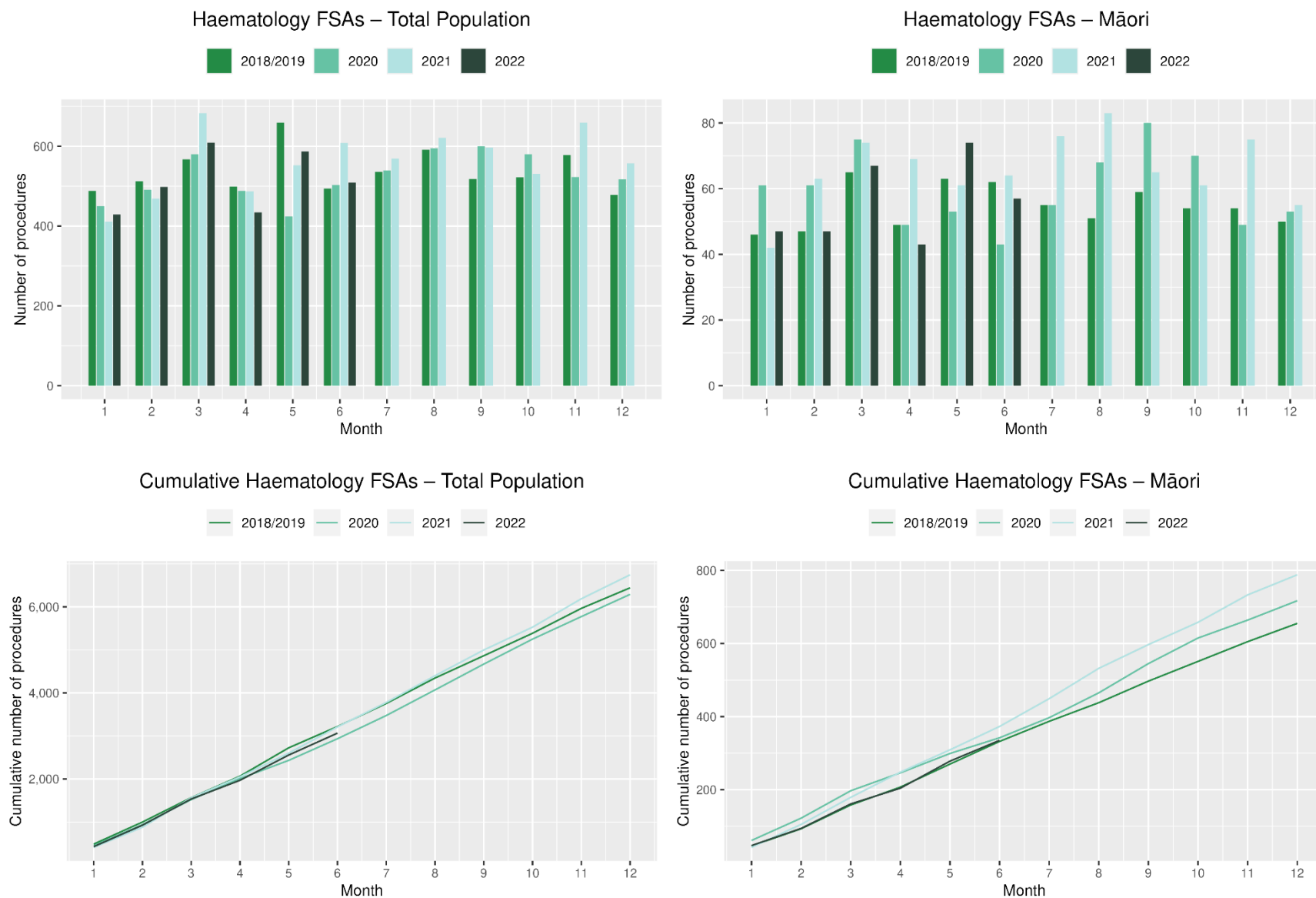


Table 19: Number of IV chemotherapy attendances for haematological malignancies and percentage difference in 2022 compared to the average of 2018 and 2019, by month and cumulative year to date, by ethnicity

	April			May			June			Cumulative January -June		
	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change	2018/2019	2022	% change
Māori	163	209	28%	200	205	2%	184	243	32%	1,139	1,287	13%
Pacific Peoples	89	97	10%	99	102	4%	92	101	10%	579	658	14%
Non-Māori/Non-Pacific	1,563	1,612	3%	1,815	1,866	3%	1,606	1,849	15%	9,725	10,958	13%
Total Population	1,814	1,918	6%	2,114	2,173	3%	1,881	2,193	17%	11,443	12,903	13%

Figure 19: Number of attendances for IV chemotherapy for haematological malignancies by month, 2018/19 average, 2020, 2021 and 2022, total population and Māori

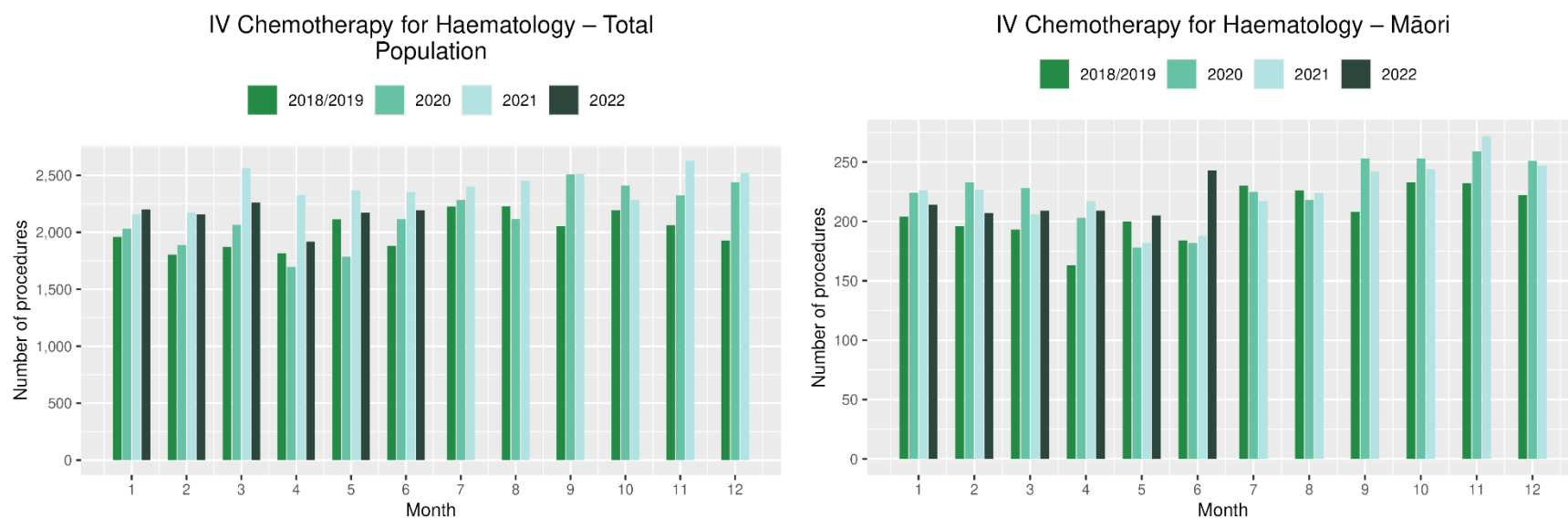
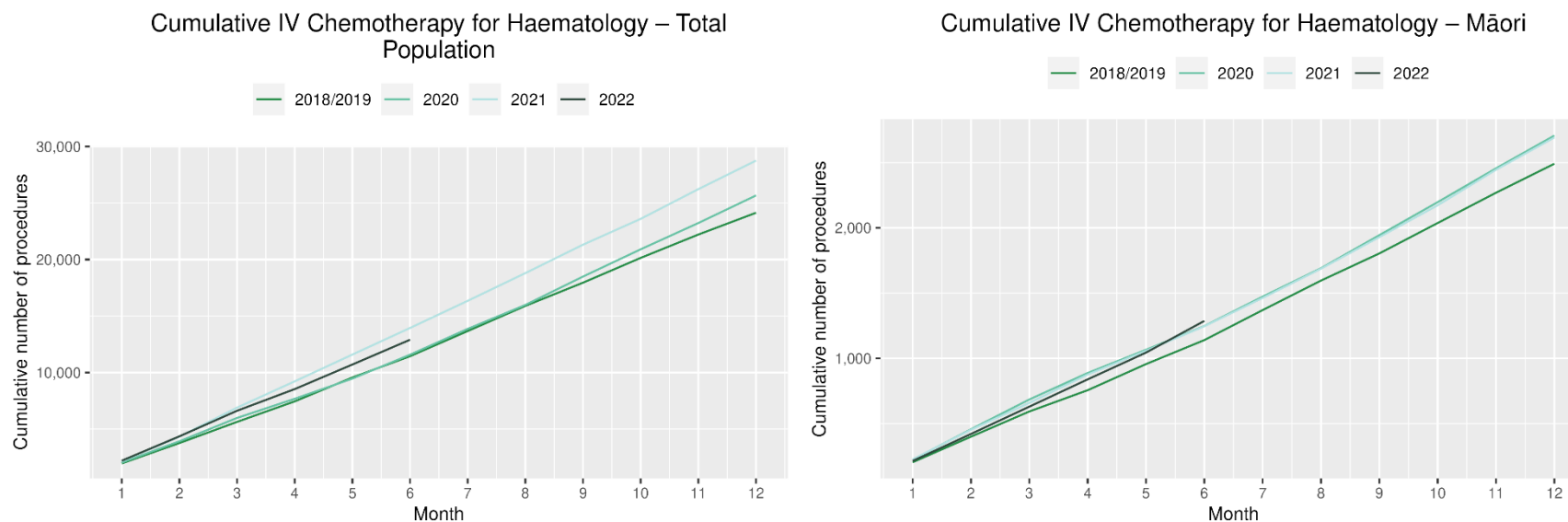


Figure 20: Cumulative number of attendances for IV chemotherapy for haematological malignancies, 2018/19 average, 2020, 2021 and 2022, total population and Māori



APPENDIX 1: KEY DATES

The follow provides a brief overview of key dates relating to COVID-19 restrictions (Alert Levels 3 and 4 where the greatest restrictions were in place) and outbreaks. More detailed information can be found on the Unite COVID-19 website⁶, including an overview of Alert Levels and the COVID-19 Protection Framework⁷.

23 March – 14 May 2020	All Aotearoa New Zealand was at Alert Level 3 or 4
12 August – 30 September 2020	Auckland only moved to Alert Level 3
28 Feb – 7 March 2021	Auckland only was at Alert Level 3
17 August to 7 September 2021	All Aotearoa New Zealand was at Alert 3 or 4 at the outset of the Delta variant outbreak
From 7 September 2021	Auckland remained at Alert Level 4; the rest of the country moved to Alert Level 2
September – December 2021	Auckland moved to and remained at Alert Level 3 from 21 September. There were various regional changes between Alert Level 2 and 3 over this period some parts of the North Island including parts of Waikato. Details are available on the Unite COVID-19 website ⁴ . Note: The definition of Alert Level 3 was eased in early October and three gradually reducing steps of level 3 were introduced in October
3 Dec 2021	End of COVID-19 Alert System. All Aotearoa New Zealand moved to the COVID-19 Protection Framework (traffic lights)
29 Dec 2021	The first case of the Omicron variant in the community in New Zealand was detected
February 2022	Omicron case numbers and hospitalisations increased more significantly in the second half of February onwards ⁸
10 March 2022	Seven day rolling average of cases is over 20,000, while daily count reaches over 23,000. This was the peak of case numbers at the time of writing.
23 March 2022	Changes are made to the Red-Light setting: no limitations on numbers of people gathering outdoors, indoors limit increase to 2000 people.
14 April 2022	New Zealand changes to the Orange traffic light setting. Indoor venue capacity rules are removed but facemasks are still required in most indoor venues.
April – June 2022	Continued Omicron outbreak, see figure 21 for graph showing the trends of new cases reported each day

⁶ <https://covid19.govt.nz/about-our-covid-19-response/history-of-the-covid-19-alert-system/>

⁷ <https://covid19.govt.nz/traffic-lights/covid-19-protection-framework>

⁸ <https://www.health.govt.nz/covid-19-novel-coronavirus/covid-19-data-and-statistics/covid-19-current-cases>

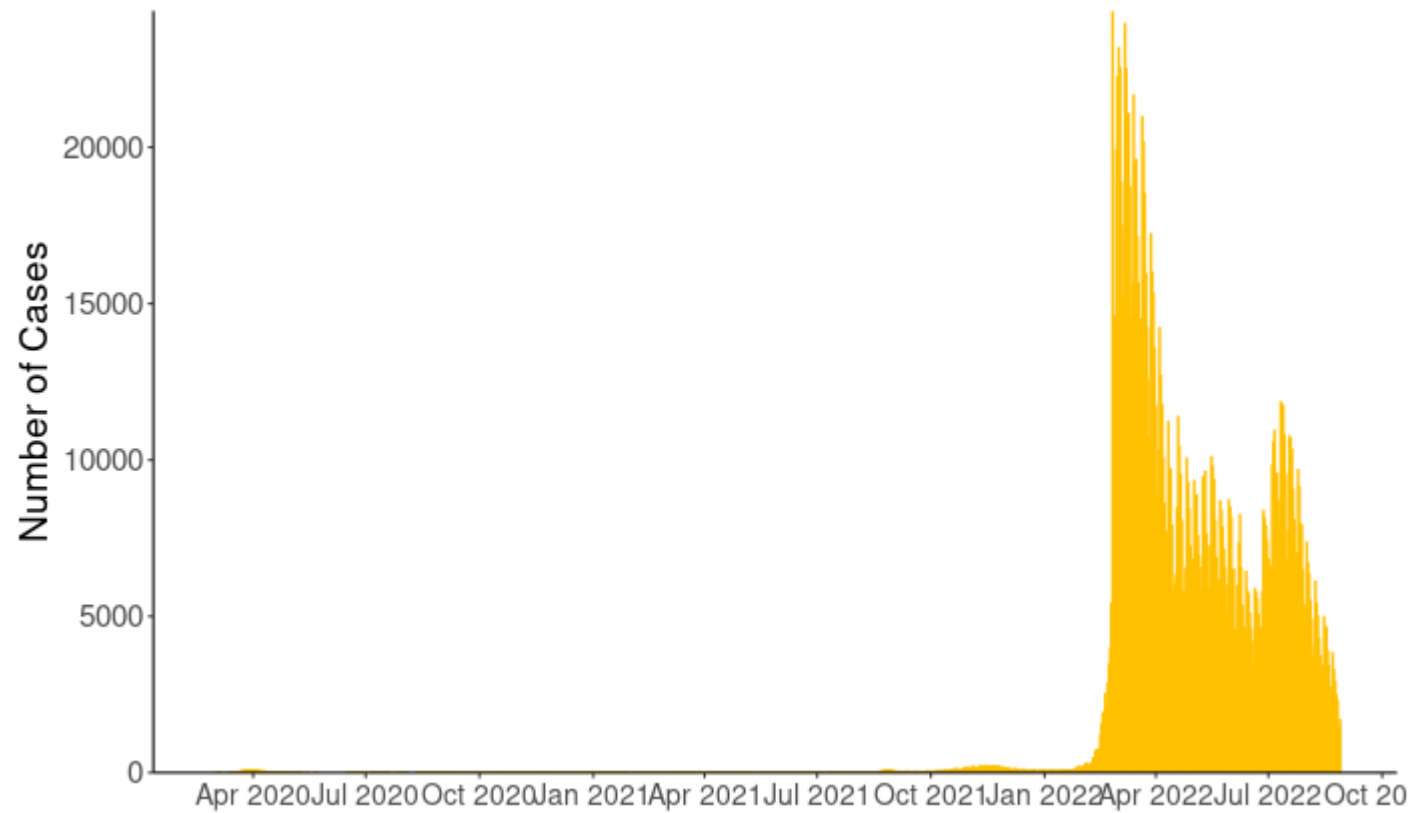


Figure 21 New COVID-19 cases reported each day (confirmed and probable) in Aotearoa New Zealand. Source: Ministry of Health, accessed August 2022
<https://www.health.govt.nz/covid-19-novel-coronavirus/covid-19-data-and-statistics/covid-19-current-cases>

APPENDIX 2: NZCR DATA INFORMATION

The New Zealand Cancer Registry as a data source 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 Organization 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 of 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”.

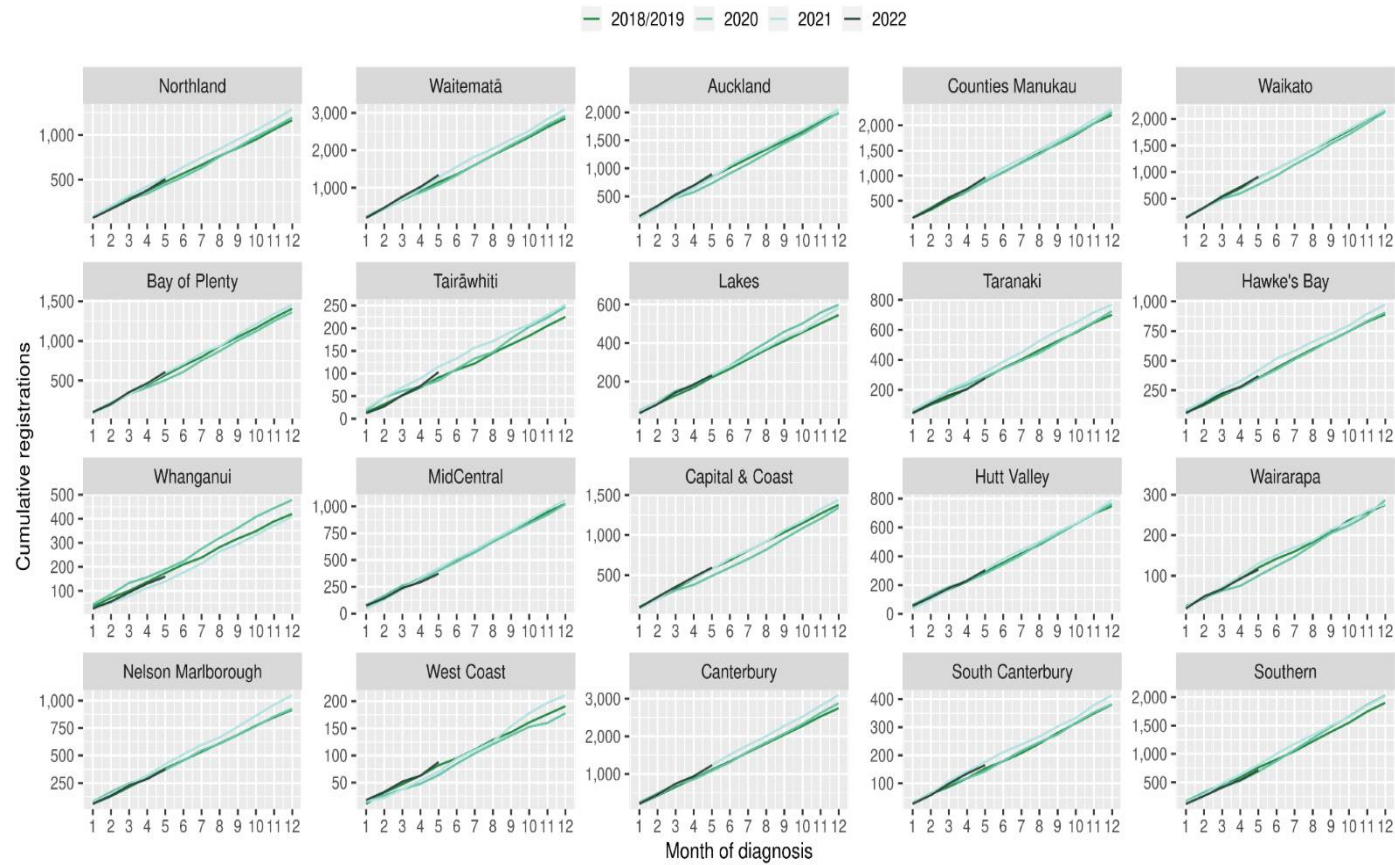
The administrator creates a new provisional cancer event if the pathology report identifies a new cancer diagnosis for this person. This new cancer event is assigned to a cancer group and this provisional event is then queued for further assessment by a clinical coder. If the required information has 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 3: NZCR REGISTRATIONS BY DHB

Number of cancer registrations and percentage difference in 2022 compared to 2018/19 average, by month and cumulative year to date, by DHB of domicile

	April			May			Cumulative January-May		
	2018/19	2022	%Change	2018/19	2022	%Change	2018/19	2022	%Change
Northland	87	111	28%	101	124	23%	475	506	7%
Waitemata	219	258	18%	255	317	24%	1154	1343	16%
Auckland	156	162	4%	193	201	4%	843	895	6%
Counties Manukau	166	170	3%	205	230	12%	888	963	8%
Waikato	164	174	6%	200	196	-2%	891	912	2%
Bay of Plenty	106	110	4%	126	145	16%	567	610	8%
Tairāwhiti	18	20	11%	22	31	44%	90	103	15%
Lakes	42	41	-1%	52	48	-8%	221	233	5%
Taranaki	59	41	-30%	72	72	0%	277	277	0%
Hawkes Bay	73	54	-26%	77	92	19%	353	371	5%
Whanganui	37	37	1%	37	29	-22%	173	159	-8%
MidCentral	92	56	-39%	86	78	-9%	418	372	-11%
Capital and Coast	120	122	2%	126	118	-6%	578	593	3%
Hutt Valley	55	52	-5%	68	74	9%	291	304	5%
Wairarapa	22	26	18%	28	22	-21%	119	115	-3%
Nelson Marlborough	85	59	-30%	84	90	8%	381	376	-1%
West Coast	16	11	-29%	19	25	35%	81	88	9%
Canterbury	218	200	-8%	238	290	22%	1112	1229	11%
South Canterbury	30	36	20%	35	30	-13%	152	165	9%
Southern	153	129	-16%	173	173	0%	762	713	-6%

Cumulative New Cancer Registrations – by DHB



Cumulative cancer registrations by DHB and ethnicity

	Total Population							Māori							Non-Māori/Non-Pacific						
	Cumulative January-May				Difference between 2018/19 and 2022			Cumulative January-May				Difference between 2018/19 and 2022			Cumulative January-May				Difference between 2018/19 and 2022		
	2018/2019	2020	2021	2022	Number	%change		2018/2019	2020	2021	2022	Number	%change		2018/2019	2020	2021	2022	Number	%change	
Northland	475	444	525	506	31	7%		110	104	136	122	12	11%		360	332	384	383	23	6%	
Waitematā	1154	1082	1281	1343	189	16%		68	82	69	78	10	15%		1033	943	1145	1178	145	14%	
Auckland	843	732	829	895	52	6%		47	36	50	61	15	31%		715	627	702	746	31	4%	
Counties Manukau	888	881	943	963	75	8%		111	126	124	106	-5	-5%		615	607	659	684	70	11%	
Waikato	891	764	885	912	22	2%		145	115	124	127	-18	-12%		732	639	743	767	36	5%	
Bay of Plenty	567	506	597	610	44	8%		89	72	99	86	-3	-3%		474	432	495	518	45	9%	
Tairāwhiti	90	84	115	103	14	15%		32	42	45	38	7	21%		56	41	69	63	7	13%	
Lakes	221	232	236	233	12	5%		55	59	72	50	-5	-9%		163	170	156	181	18	11%	
Taranaki	277	288	318	277	1	0%		32	30	41	30	-2	-5%		244	257	275	245	2	1%	
Hawkes Bay	353	350	419	371	18	5%		65	62	72	53	-12	-18%		276	282	338	311	35	13%	
Whanganui	173	189	139	159	-14	-8%		27	29	34	22	-5	-19%		145	160	104	136	-9	-6%	
MidCentral	418	400	421	372	-46	-11%		43	40	52	49	7	15%		373	354	366	318	-55	-15%	
Capital and Coast	578	489	574	593	16	3%		43	44	56	49	7	15%		505	416	480	509	4	1%	
Hutt Valley	291	280	304	304	14	5%		37	28	41	31	-6	-16%		239	241	240	259	20	8%	
Wairarapa	119	100	130	115	-4	-3%		*	13	13	*	*	*		109	87	116	109	0	0%	
Nelson Marlborough	381	370	421	376	-5	-1%		22	13	20	24	3	12%		357	355	398	347	-10	-3%	
West Coast	81	64	70	88	8	9%		*	*	10	*	*	-25%		76	61	60	85	10	13%	
Canterbury	1112	1085	1229	1229	118	11%		61	60	66	82	22	36%		1030	1007	1149	1133	104	10%	
South Canterbury	152	143	177	165	14	9%		*	*	*	*	*	*		145	139	172	156	12	8%	
Southern	762	691	810	713	-49	-6%		40	39	59	38	-2	-5%		717	643	744	665	-52	-7%	
Total	9,821	9,174	10,423	10,327	507	5%		1042	1001	1188	1062	21	2%		8,360	7,793	8,795	8,793	434	5%	

Cumulative cancer registrations by cancer type and ethnicity

	Total Population							Māori							Non-Māori/Non-Pacific						
	Cumulative January-May				Difference between 2018/19 and 2022			Cumulative January-May				Difference between 2018/19 and 2022			Cumulative January-May				Difference between 2018/19 and 2022		
	2018/2019	2020	2021	2022	Number	%change		2018/2019	2020	2021	2022	Number	%change		2018/2019	2020	2021	2022	Number	%change	
Breast	1,494	1,269	1,595	1,529	35	2%		211	200	242	200	-11	-5%		1,209	993	1,254	1,229	20	2%	
Colorectal	1,279	1,300	1,348	1,405	127	10%		85	114	112	95	11	12%		1,160	1,161	1,195	1,255	95	8%	
Gynaecology	438	440	448	441	3	1%		66	57	65	58	-8	-12%		317	333	327	309	-8	-3%	
Haematology and Lymphoid	1,030	865	990	966	-64	-6%		106	82	105	81	-25	-23%		877	735	843	846	-31	-3%	
Melanoma and non-melanoma skin cancer	1,395	1,265	1,578	1,589	194	14%		32	25	37	37	5	16%		1,359	1,233	1,536	1,546	188	14%	
Other digestive system	602	660	678	672	71	12%		94	113	107	105	11	12%		464	510	522	526	63	13%	
Prostate	1,583	1,361	1,575	1,563	-20	-1%		122	104	139	137	16	13%		1,407	1,215	1,394	1,379	-28	-2%	
Respiratory and thorax	711	768	749	724	13	2%		157	150	161	166	9	6%		513	570	548	511	-2	0%	
Urinary system	422	422	452	419	-3	-1%		44	46	53	52	8	18%		366	359	378	351	-15	-4%	
Total	8,953	8,350	9,413	9,308	356	4%		915	891	1021	931	16	2%		7,670	7,109	7,997	7,952	283	4%	

APPENDIX 4: DIAGNOSIS AND TREATMENT DATA BY DHB

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

Gastrointestinal endoscopy

	Total population							Māori							Non-Māori / Non-Pacific						
	Cumulative number for Jan- Jun				Difference between 2022 and 2018/19			Cumulative number for Jan-Jun				Difference between 2022 and 2018/19			Cumulative number for Jan- Jun				Difference between 2022 and 2018/19		
	2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change	
Northland	1,915	1,498	2,158	2,184	270	14%		340	273	430	444	105	31%		1,561	1,213	1,710	1,718	158	10%	
Waitematā	4,155	4,079	5,473	5,042	888	21%		232	223	319	273	41	18%		3,781	3,681	4,960	4,588	808	21%	
Auckland	3,016	2,481	3,151	2,846	-170	-6%		149	139	176	191	42	28%		2,673	2,132	2,729	2,459	-214	-8%	
Counties Manukau	4,120	5,078	5,057	5,660	1,540	37%		393	512	480	548	155	39%		3,203	3,871	3,877	4,285	1,083	34%	
Waikato	2,837	2,946	3,306	2,909	72	3%		337	367	442	408	72	21%		2,461	2,533	2,823	2,461	1	0%	
Bay of Plenty	2,319	2,140	3,368	2,650	332	14%		287	284	418	392	106	37%		2,024	1,848	2,931	2,233	210	10%	
Lakes	942	788	1,205	945	3	0%		173	153	222	190	17	10%		756	616	967	737	-19	-3%	
Tairāwhiti	343	308	386	419	77	22%		99	96	113	129	31	31%		242	207	271	285	44	18%	
Taranaki	951	833	1,323	1,194	244	26%		100	65	132	145	46	46%		847	763	1,186	1,039	193	23%	
Whanganui	722	577	662	420	-302	-42%		102	75	87	62	-40	-39%		619	496	572	354	-265	-43%	
Hawkes Bay	1,307	1,264	1,762	1,619	312	24%		148	169	226	266	119	80%		1,144	1,075	1,513	1,333	189	17%	
MidCentral	1,031	1,047	1,577	1,356	325	32%		69	94	151	151	83	120%		953	943	1,408	1,191	239	25%	
Capital and Coast	1,411	1,525	1,603	1,895	484	34%		91	121	144	155	64	70%		1,262	1,350	1,398	1,641	380	30%	
Hutt Valley	1,309	1,496	1,613	1,751	442	34%		103	151	149	192	90	87%		1,163	1,294	1,399	1,497	334	29%	
Wairarapa	472	381	538	361	-111	-24%		42	34	49	30	-12	-28%		425	343	486	327	-98	-23%	
Nelson Marlborough	840	1,180	1,425	1,315	476	57%		45	66	81	82	37	82%		790	1,105	1,336	1,229	439	56%	
West Coast	306	332	430	352	47	15%		20	11	36	22	2	10%		285	319	394	326	42	15%	
Canterbury	3,749	3,595	3,864	4,246	498	13%		212	203	197	268	57	27%		3,483	3,339	3,604	3,909	427	12%	
South Canterbury	579	567	692	561	-18	-3%		24	23	28	31	8	32%		556	543	662	526	-30	-5%	
Southern	2,298	2,089	2,972	2,960	663	29%		105	117	167	152	47	45%		2,176	1,949	2,779	2,778	603	28%	
Grand total	34,617	34,204	42,565	40,685	6,069	18%		3,065	3,176	4,047	4,131	1,066	35%		30,396	29,620	37,005	34,916	4,520	15%	

Bronchoscopy

	Total population						Māori						Non-Māori / Non-Pacific					
	Cumulative number for Jan- Jun				Difference between 2022 and 2018/19		Cumulative number for Jan- Jun				Difference between 2022 and 2018/19		Cumulative number for Jan- Jun				Difference between 2022 and 2018/19	
	2018/2019	2020	2021	2022	Number	% change	2018/2019	2020	2021	2022	Number	% change	2018/2019	2020	2021	2022	Number	% change
Northland	39	32	57	55	17	43%	12	*	17	19	7	58%	26	22	40	35	9	35%
Waitematā	75	63	106	102	27	36%	*	*	13	*	*	*	70	54	92	91	22	31%
Auckland	172	151	143	152	-20	-12%	16	16	13	36	21	132%	142	119	122	105	-37	-26%
Counties Manukau	176	173	167	186	10	6%	33	17	32	39	6	18%	118	129	110	125	7	6%
Waikato	140	94	134	95	-45	-32%	31	22	29	17	-14	-44%	107	71	105	76	-31	-29%
Bay of Plenty	81	65	97	48	-33	-41%	18	18	28	*	*	*	63	47	69	39	-24	-38%
Lakes	42	34	39	26	-16	-37%	15	16	17	*	*	*	27	17	22	18	-9	-32%
Tairāwhiti	*	14	17	*	*	*	*	*	*	*	*	*	*	*	12	*	*	*
Taranaki	24	18	28	39	16	66%	*	*	*	*	*	*	19	18	20	32	14	73%
Whanganui	*	*	10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hawkes Bay	40	17	41	27	-13	-32%	11	*	12	*	*	*	29	14	28	18	-11	-37%
MidCentral	20	12	19	14	-6	-30%	*	*	*	*	*	*	16	11	12	10	-6	-38%
Capital and Coast	48	29	33	40	-8	-16%	*	*	*	*	*	*	40	23	29	29	-11	-28%
Hutt Valley	54	39	45	40	-14	-25%	*	*	*	14	*	*	43	32	30	24	-19	-44%
Nelson Marlborough	34	44	40	45	12	34%	*	*	*	*	*	*	30	38	38	41	12	39%
Canterbury	187	185	196	162	-25	-13%	16	8	13	16	0	0%	169	172	181	140	-29	-17%
South Canterbury	*	*	11	*	*	*	*	*	*	*	*	*	*	*	11	*	*	*
Southern	127	67	128	97	-30	-23%	10	*	*	*	*	*	115	59	119	83	-32	-28%
Grand total	1268	1053	1311	1142	-126	-10%	195	146	218	214	20	10%	1020	849	1045	872	-148	-15%

CT Lung Biopsy

	Total population							Māori							Non-Māori / Non-Pacific						
	Cumulative number for Jan- Jun				Difference between 2022 and 2018/19			Cumulative number for Jan- Jun				Difference between 2022 and 2018/19			Cumulative number for Jan- Jun				Difference between 2022 and 2018/19		
	2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change	
Northland	25	22	55	33	9	35%		*	*	22	13	*	*		15	14	33	19	4	27%	
Waitematā	13	20	17	21	8	62%		*	*	*	*	*	*		*	19	*	20	*	*	
Auckland	*	19	15	*	*	*		*	*	*	*	*	*		*	13	*	*	*	*	
Counties Manukau	44	42	28	21	-23	-52%		*	*	*	*	*	*		26	28	17	16	-10	-37%	
Waikato	47	44	34	52	6	12%		*	*	12	*	*	*		37	37	22	41	4	11%	
Bay of Plenty	29	24	34	27	-2	-5%		*	*	*	11	*	*		21	18	25	16	-5	-22%	
Lakes	*	15	17	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Tairāwhiti	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Taranaki	17	18	25	11	-6	-35%		*	*	*	*	*	*		14	16	22	10	-4	-29%	
Whanganui	*	12	8	10	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Hawkes Bay	25	18	18	23	-2	-8%		*	*	*	*	*	*		18	13	16	16	-2	-9%	
MidCentral	38	43	18	30	-8	-20%		*	*	*	*	*	*		33	38	13	21	-12	-36%	
Capital and Coast	16	17	15	19	3	19%		*	*	*	*	*	*		12	*	15	13	2	13%	
Hutt Valley	14	16	15	19	5	36%		*	*	*	*	*	*		10	15	12	16	6	60%	
Wairarapa	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Nelson Marlborough	20	16	32	16	-4	-18%		*	*	*	*	*	*		17	14	30	14	-3	-15%	
Canterbury	103	110	116	71	-32	-31%		11	10	*	*	*	*		92	99	105	62	-30	-33%	
South Canterbury	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Southern	36	36	35	25	-11	-30%		*	*	*	*	*	*		32	32	35	23	-9	-28%	
Grand total	452	481	486	400	-52	-11%		81	69	91	74	-7	-8%		354	389	383	311	-43	-12%	

Breast cancer surgery (mastectomy)

	Total population						Māori						Non-Māori / Non-Pacific					
	Cumulative number for Jan-Jun				Difference between 2022 and 2018/19		Cumulative number for Jan- Jun				Difference between 2022 and 2018/19		Cumulative number for Jan- Jun				Difference between 2022 and 2018/19	
	2018/2019	2020	2021	2022	Number	% change	2018/2019	2020	2021	2022	Number	% change	2018/2019	2020	2021	2022	Number	% change
Northland	38	40	43	49	11	29%	12	15	12	17	5	42%	26	24	30	32	6	23%
Waitematā	63	65	64	81	19	30%	*	*	*	*	*	*	51	54	58	69	18	35%
Auckland	57	35	66	60	4	6%	*	*	*	*	*	*	46	26	46	45	-1	-1%
Counties Manukau	122	142	135	123	2	1%	23	21	23	23	1	2%	75	88	86	71	-4	-5%
Waikato	56	53	55	42	-14	-25%	18	22	8	13	-5	-26%	38	30	46	28	-10	-25%
Bay of Plenty	50	53	55	37	-13	-26%	11	13	13	8	-3	-24%	40	40	41	29	-11	-27%
Lakes	20	28	21	24	4	20%	11	*	10	13	2	18%	*	18	11	10	*	*
Tairāwhiti	11	4	11	8	-3	-24%	*	*	*	*	*	*	*	*	*	*	*	*
Taranaki	22	21	38	23	2	7%	*	*	*	*	*	*	18	16	32	18	0	0%
Whanganui	18	16	19	14	-4	-20%	*	*	*	*	*	*	14	14	13	13	-1	-4%
Hawkes Bay	38	33	39	24	-14	-37%	*	13	12	*	*	*	28	20	26	16	-12	-43%
MidCentral	24	17	22	21	-3	-11%	*	*	*	*	*	*	19	14	17	17	-2	-11%
Capital and Coast	26	31	44	37	11	42%	*	*	*	*	*	*	21	24	34	26	6	27%
Hutt Valley	38	39	36	29	-9	-23%	*	*	*	*	*	*	30	37	29	23	-7	-22%
Wairarapa	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Nelson Marlborough	32	29	35	30	-2	-5%	*	*	*	*	*	*	29	26	34	27	-2	-5%
Canterbury	82	83	86	65	-17	-20%	*	*	*	*	*	*	74	72	78	60	-14	-18%
South Canterbury	13	*	21	18	6	44%	*	*	*	*	*	*	11	*	18	17	7	62%
Southern	61	62	50	45	-16	-26%	*	*	*	*	*	*	58	58	44	41	-17	-29%
Grand total	768	762	841	732	-36	-5%	132	132	133	128	-4	-3%	590	572	648	548	-42	-7%

Colorectal cancer surgery

	Total population							Māori							Non-Māori / Non-Pacific						
	Cumulative number for Jan-Jun				Difference between 2022 and 2018/19			Cumulative number for Jan- Jun				Difference between 2022 and 2018/19			Cumulative number for Jan- Jun				Difference between 2022 and 2018/19		
	2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change	
Northland	45	43	59	44	-1	-1%		*	12	15	*	*	*		37	31	44	37	1	1%	
Waitematā	133	111	88	92	-41	-31%		*	*	*	*	*	*		117	99	82	85	-32	-27%	
Auckland	95	97	104	101	6	6%		*	11	11	*	*	*		80	82	82	74	-6	-7%	
Counties Manukau	70	78	61	57	-13	-19%		*	15	*	*	*	*		59	54	47	37	-22	-37%	
Waikato	107	123	128	96	-11	-10%		10	17	20	18	8	80%		95	105	105	76	-19	-20%	
Bay of Plenty	71	89	66	70	-1	-1%		*	12	13	10	*	*		62	77	49	60	-2	-3%	
Lakes	37	37	37	44	8	21%		*	*	*	11	*	*		31	30	26	33	3	8%	
Tairāwhiti	12	14	17	15	3	25%		*	*	*	*	*	*		*	11	*	*	*	*	*
Taranaki	45	34	42	55	10	22%		*	*	*	*	*	*		41	30	36	50	9	22%	
Whanganui	27	22	23	24	-3	-9%		*	*	*	*	*	*		25	20	22	24	-1	-2%	
Hawkes Bay	75	61	59	57	-18	-24%		*	*	*	*	*	*		66	50	52	51	-15	-22%	
MidCentral	59	67	67	54	-5	-8%		*	*	*	*	*	*		55	60	60	45	-10	-18%	
Capital and Coast	74	71	72	79	5	7%		*	10	12	*	*	*		65	59	55	70	6	9%	
Hutt Valley	29	25	32	27	-2	-7%		*	*	*	*	*	*		27	23	29	24	-3	-9%	
Wairarapa	11	*	11	*	*	*		*	*	*	*	*	*		11	*	*	*	*	*	*
Nelson Marlborough	46	33	40	40	-6	-13%		*	*	*	*	*	*		44	31	39	38	-6	-13%	
West Coast	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	*
Canterbury	158	144	166	159	1	1%		*	12	*	10	*	*		147	129	154	147	1	0%	
South Canterbury	27	17	31	26	-1	-4%		*	*	*	*	*	*		27	15	31	26	-1	-2%	
Southern	127	102	121	93	-34	-26%		*	*	*	*	*	*		120	100	114	90	-30	-25%	
Grand total	1248	1175	1227	1145	-103	-8%		100	137	132	117	18	18%		1114	1013	1047	986	-128	-11%	

Lung cancer surgery

	Total population							Māori							Non-Māori / Non-Pacific						
	Cumulative number for Jan-Jun				Difference between 2022 and 2018/19			Cumulative number for Jan-Jun				Difference between 2022 and 2018/19			Cumulative number for Jan-Jun				Difference between 2022 and 2018/19		
	2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change	
Auckland	138	130	108	137	-1	0%		26	21	19	20	-6	-23%		103	97	80	105	2	2%	
Counties Manukau	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Waikato	62	85	75	68	7	11%		21	20	22	11	-10	-46%		40	64	52	56	16	40%	
Bay of Plenty	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Capital and Coast	64	48	70	57	-7	-11%		12	*	14	*	*	*		49	40	51	45	-4	-7%	
Canterbury	43	55	48	49	6	14%		*	*	15	*	*	*		42	52	32	40	-2	-4%	
Southern	20	13	18	24	4	20%		*	*	*	*	*	*		19	12	18	23	5	24%	
Grand total	327	333	320	335	8	2%		62	52	70	46	-16	-25%		252	266	234	269	17	7%	

Prostate cancer surgery

	Total population							Māori							Non-Māori / Non-Pacific						
	Cumulative number for Jan-Jun				Difference between 2022 and 2018/19			Cumulative number for Jan-Jun				Difference between 2022 and 2018/19			Cumulative number for Jan- Jun				Difference between 2022 and 2018/19		
	2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change	
Northland	26	17	37	16	-10	-37%		*	*	*	*	*	*		22	12	31	15	-7	-32%	
Waitematā	34	59	39	51	17	50%		*	*	*	*	*	*		33	56	32	47	15	45%	
Auckland	47	62	47	53	7	14%		*	*	*	*	*	*		41	58	35	43	3	6%	
Counties Manukau	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Waikato	36	27	30	23	-13	-35%		*	*	*	*	*	*		35	25	22	17	-18	-51%	
Bay of Plenty	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Lakes	28	31	20	21	-7	-24%		*	*	*	*	*	*		24	21	14	20	-4	-15%	
Tairāwhiti	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Taranaki	12	17	25	20	9	74%		*	*	*	*	*	*		11	13	25	18	8	71%	
Whanganui	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Hawkes Bay	*	*	15	20	*	*		*	*	*	*	*	*		*	*	13	*	*	*	
MidCentral	39	41	28	33	-6	-15%		*	*	*	*	*	*		36	39	25	27	-9	-24%	
Capital and Coast	28	32	47	32	4	14%		*	*	*	*	*	*		25	31	41	29	5	18%	
Wairarapa	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Nelson Marlborough	21	23	18	18	-3	-14%		*	*	*	*	*	*		21	23	17	17	-4	-17%	
West Coast	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Canterbury	35	39	32	39	5	13%		*	*	*	*	*	*		34	37	31	37	3	9%	
South Canterbury	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Southern	37	48	56	47	11	29%		*	*	*	*	*	*		33	44	51	43	10	30%	
Grand total	368	427	424	393	25	7%		25	40	44	36	12	47%		337	384	363	348	12	3%	

Medical oncology first specialist assessments

	Total population							Māori							Non-Māori / Non-Pacific						
	Cumulative number for Jan- Jun				Difference between 2022 and 2018/19			Cumulative number for Jan-Jun				Difference between 2022 and 2018/19			Cumulative number for Jan- Jun				Difference between 2022 and 2018/19		
	2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change	
Northland	238	209	267	264	26	11%		61	58	87	90	29	48%		176	148	178	172	-4	-2%	
Auckland	1127	1211	1254	1238	111	10%		126	131	137	144	19	15%		860	901	947	916	56	7%	
Waikato	401	405	395	416	15	4%		89	89	91	90	1	1%		303	310	297	317	14	5%	
Bay of Plenty	225	268	268	265	40	18%		46	45	58	52	7	14%		179	222	207	210	32	18%	
Lakes	65	91	117	116	51	78%		22	25	40	34	13	58%		43	66	75	82	40	93%	
Tairāwhiti	57	68	75	57	0	0%		25	33	33	18	-7	-27%		33	35	42	36	4	11%	
Taranaki	111	118	118	137	26	23%		12	14	20	13	1	8%		99	103	97	121	23	23%	
MidCentral	521	540	592	514	-7	-1%		84	84	110	87	3	4%		426	447	474	415	-11	-3%	
Capital and Coast	435	438	458	446	11	3%		51	59	58	45	-6	-11%		359	354	366	378	19	5%	
Wairarapa	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Nelson Marlborough	215	223	213	217	3	1%		17	10	10	18	2	9%		197	212	201	197	0	0%	
West Coast	16	*	18	23	8	48%		*	*	*	*	*	*		14	*	16	22	8	57%	
Canterbury	647	640	637	658	11	2%		45	37	43	44	-1	-1%		594	592	590	605	11	2%	
South Canterbury	*	35	52	72	*	*		*	*	*	*	*	*		*	33	50	70	*	*	
Southern	327	314	281	320	-7	-2%		18	17	13	23	6	31%		308	293	262	290	-18	-6%	
Grand total	4,385	4,567	4,745	4,755	371	8%		593	604	704	662	69	12%		3,590	3,723	3,802	3,842	252	7%	

Medical oncology IV chemotherapy

	Total population						Māori						Non-Māori / Non-Pacific					
	Cumulative number for Jan-Jun				Difference between 2022 and 2018/19		Cumulative number for Jan-Jun				Difference between 2022 and 2018/19		Cumulative number for Jan-Jun				Difference between 2022 and 2018/19	
	2018/2019	2020	2021	2022	Number	% change	2018/2019	2020	2021	2022	Number	% change	2018/2019	2020	2021	2022	Number	% change
Northland	1,469	1,544	1,691	1,713	244	17%	305	482	536	579	274	90%	1,149	1,045	1,124	1,122	-27	-2%
Waitematā	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Auckland	8,983	10,929	11,770	11,741	2,758	31%	858	1233	1280	1298	441	51%	7,053	8,438	8,933	8,730	1,678	24%
Waikato	3,601	3,024	3,916	3,680	80	2%	566	512	660	681	115	20%	2,993	2,461	3,201	2,939	-54	-2%
Bay of Plenty	2,482	2,892	2,602	2,798	316	13%	434	582	617	610	176	41%	2,017	2,292	1,965	2,180	163	8%
Lakes	1,407	1,501	1,664	1,692	286	20%	392	462	553	479	87	22%	983	1,027	1,069	1,175	192	20%
Tairāwhiti	337	275	838	298	-39	-12%	152	133	394	119	-33	-22%	185	141	438	175	-10	-5%
Taranaki	829	1,019	1,112	1,046	217	26%	79	102	186	204	125	158%	740	903	926	816	76	10%
Whanganui	57	48	42	97	40	70%	10	*	*	*	*	*	47	41	38	89	42	89%
Hawkes Bay	15	46	31	17	2	13%	*	36	18	*	*	*	12	10	10	16	4	33%
MidCentral	3,600	3,816	4,567	4,007	407	11%	581	602	936	772	192	33%	2,924	3,165	3,576	3,167	244	8%
Capital and Coast	3,271	3,189	2,900	3,111	-160	-5%	318	385	354	381	63	20%	2,794	2,606	2,333	2,560	-234	-8%
Hutt Valley	58	46	85	56	-2	-3%	*	*	*	*	*	*	50	39	74	48	-2	-3%
Wairarapa	*	34	28	25	*	*	*	*	*	*	*	*	*	25	21	25	*	*
Nelson Marlborough	1,421	1,492	1,381	1,641	220	15%	115	74	63	135	20	17%	1,279	1,402	1,318	1,497	218	17%
West Coast	16	21	14	12	-4	-25%	*	*	*	*	*	*	16	16	14	10	-6	-38%
Canterbury	3,163	3,103	3,175	3,433	271	9%	201	202	217	160	-41	-20%	2,877	2,786	2,906	3,220	344	12%
South Canterbury	534	517	542	546	13	2%	*	11	17	33	*	*	524	506	525	513	-11	-2%
Southern	3,466	3,593	3,014	2,431	-1,035	-30%	186	234	117	187	1	1%	3,260	3,302	2,851	2,196	-1,064	-33%
Grand total	34,715	37,089	39,374	38,345	3,631	10%	4,209	5,072	5,963	5,651	1443	34%	28,909	30,205	31,323	30,479	1,571	5%

Radiation oncology first specialist assessments

	Total population							Māori							Non-Māori / Non-Pacific						
	Cumulative number for Jan-Jun				Difference between 2022 and 2018/19			Cumulative number for Jan-Jun				Difference between 2022 and 2018/19			Cumulative number for Jan-Jun				Difference between 2022 and 2018/19		
	2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change	
Northland	177	139	198	192	16	9%		46	50	67	55	10	21%		129	88	131	136	8	6%	
Auckland	1569	1664	1673	1563	-6	0%		189	186	221	186	-3	-1%		1190	1302	1246	1158	-32	-3%	
Waikato	701	741	730	736	36	5%		119	161	147	143	24	20%		568	573	569	580	13	2%	
Bay of Plenty	442	459	589	443	1	0%		59	66	104	76	18	30%		380	389	479	361	-19	-5%	
Lakes	20	*	11	*	*	-64%		*	*	*	*	*	*		16	*	*	*	*	*	
Tairāwhiti	36	26	17	52	16	44%		13	13	*	22	9	69%		23	13	12	29	7	29%	
MidCentral	828	874	901	837	9	1%		103	118	129	121	18	17%		716	742	763	700	-16	-2%	
Capital and Coast	699	665	761	736	37	5%		69	70	71	55	-14	-20%		598	565	647	635	37	6%	
Wairarapa	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Nelson Marlborough	66	97	108	86	21	31%		*	*	*	*	*	*		62	89	103	81	20	32%	
West Coast	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Canterbury	790	946	873	927	137	17%		42	41	50	47	5	12%		738	893	812	869	132	18%	
Southern	504	503	469	559	55	11%		27	39	28	40	13	48%		470	456	439	507	38	8%	
Grand total	5,835	6,123	6,338	6,145	310	5%		673	754	830	753	80	12%		4,890	5,116	5,216	5,067	177	4%	

Radiation oncology megavoltage fractions

	Total population							Māori							Non-Māori / Non-Pacific						
	Cumulative number for Jan-Jun				Difference between 2022 and 2018/19			Cumulative number for Jan-Jun				Difference between 2022 and 2018/19			Cumulative number for Jan-Jun				Difference between 2022 and 2018/19		
	2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change	
Auckland	22,130	20,338	20,833	18,963	-3,167	-14%		2,925	2,404	3,436	2,690	-235	-8%		17,031	15,634	14,913	14,392	-2,639	-15%	
Waikato	10,912	9,697	8,546	9,166	-1,746	-16%		1,989	2,108	1,721	1,949	-40	-2%		8,732	7,480	6,674	7,018	-1,714	-20%	
Bay of Plenty	8,737	8,131	9,375	8,060	-677	-8%		1,527	1,305	1,630	1,288	-239	-16%		7,108	6,694	7,613	6,746	-362	-5%	
MidCentral	11,169	10,841	11,765	11,539	370	3%		1,559	1,423	1,752	1,929	371	24%		9,510	9,247	9,960	9,434	-76	-1%	
Capital and Coast	10,083	9,557	10,451	8,863	-1,220	-12%		1,037	1,098	1,168	1,033	-4	0%		8,559	8,009	8,770	7,285	-1,274	-15%	
Canterbury	12,776	11,746	11,596	11,667	-1,109	-9%		813	775	664	667	-146	-18%		11,765	10,830	10,781	10,886	-879	-7%	
Southern	7,338	6,098	6,391	5,349	-1,989	-27%		438	308	342	446	9	2%		6,796	5,718	6,018	4,799	-1,997	-29%	
Grand total	83,144	76,408	78,957	73,607	-9,537	-11%		10,285	9,421	10,713	10,002	-283	-3%		69,498	63,612	64,729	60,560	-8,938	-13%	

Haematology first specialist assessment

	Total population							Māori							Non-Māori / Non-Pacific						
	Cumulative number for Jan- Jun				Difference between 2022 and 2018/19			Cumulative number for Jan-Jun				Difference between 2022 and 2018/19			Cumulative number for Jan-Jun				Difference between 2022 and 2018/19		
	2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change		2018/2019	2020	2021	2022	Number	% change	
Northland	109	117	83	109	1	0%		22	30	21	36	14	64%		85	86	61	72	-13	-15%	
Waitematā	346	350	297	319	-27	-8%		19	28	24	14	-5	-24%		313	307	257	281	-32	-10%	
Auckland	478	365	519	439	-39	-8%		36	31	49	38	3	7%		394	290	425	357	-37	-9%	
Counties Manukau	373	366	382	385	13	3%		43	47	50	40	-3	-7%		273	265	269	257	-16	-6%	
Waikato	366	381	334	304	-62	-17%		67	63	57	45	-22	-32%		293	311	268	254	-39	-13%	
Bay of Plenty	195	148	185	217	23	12%		31	23	27	41	10	32%		160	122	154	173	14	8%	
Lakes	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Tairāwhiti	19	19	27	26	8	41%		*	*	*	14	*	*		13	16	17	11	-2	-15%	
Taranaki	75	93	86	90	15	20%		*	11	*	*	*	*		67	82	79	80	14	20%	
MidCentral	380	363	397	375	-5	-1%		48	44	58	40	-8	-17%		328	311	334	329	1	0%	
Capital and Coast	388	295	343	265	-123	-32%		27	36	32	30	3	11%		347	243	279	220	-127	-37%	
Nelson Marlborough	98	57	64	73	-25	-26%		*	*	*	*	*	*		95	54	61	67	-28	-29%	
West Coast	10	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Canterbury	243	252	298	269	27	11%		14	14	20	11	-3	-19%		222	235	273	258	37	16%	
Southern	142	129	191	190	49	34%		*	*	15	12	*	*		130	119	173	170	41	31%	
Grand total	3,217	2,936	3,210	3,066	-151	-5%		331	342	373	335	4	1%		2,727	2,442	2,653	2,534	-193	-7%	

Haematology IV chemotherapy

	Total population						Māori						Non-Māori / Non-Pacific					
	Cumulative number for Jan-Jun				Difference between 2022 and 2018/19		Cumulative number for Jan-Jun				Difference between 2022 and 2018/19		Cumulative number for Jan-Jun				Difference between 2022 and 2018/19	
	2018/2019	2020	2021	2022	Number	% change	2018/2019	2020	2021	2022	Number	% change	2018/2019	2020	2021	2022	Number	% change
Northland	932	711	761	617	-315	-34%	210	138	188	147	-63	-30%	708	546	563	470	-238	-34%
Waitematā	1,987	1,957	1,850	1,910	-77	-4%	64	101	68	111	48	75%	1,827	1,736	1,726	1,718	-109	-6%
Auckland	1,762	1,664	2,113	1,586	-176	-10%	111	60	113	117	6	5%	1,458	1,451	1,747	1,281	-177	-12%
Counties Manukau	804	1,048	1,664	1,293	490	61%	126	98	176	111	-15	-12%	507	793	1,206	935	428	84%
Waikato	924	1,081	1,243	1,175	251	27%	152	206	240	141	-11	-7%	770	875	968	997	228	30%
Bay of Plenty	621	501	828	793	173	28%	59	66	110	70	12	20%	548	435	700	718	170	31%
Lake	171	315	352	331	161	94%	49	77	80	70	22	44%	122	238	251	237	115	94%
Tairāwhiti	78	50	83	50	-28	-36%	10	*	15	16	6	60%	62	46	68	32	-30	-48%
MidCentral	1,353	1,177	1,025	1,181	-172	-13%	155	106	67	174	19	12%	1,188	1,065	939	1,001	-187	-16%
Capital and Coast	1,589	1,595	1,479	1,167	-422	-27%	120	213	68	201	82	68%	1,407	1,255	1,274	904	-503	-36%
Nelson Marlborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
West Coast	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canterbury	1,113	1,357	1,350	1,515	403	36%	85	159	59	35	-50	-59%	1,022	1,171	1,289	1,479	458	45%
Southern *	106	114	1,187	1,285	1,180	1118%	*	20	62	94	93	*	105	93	1,120	1,186	1082	1035%
Grand total	11,443	11,580	13,944	12,903	1461	13%	1,139	1,248	1,246	1,287	148	13%	9,725	9,714	11,860	10,958	1233	13%

* Note the relatively low volumes in Southern DHB in prior years are due to variation in coding.

Faster Cancer Treatment

	62 days indicator achievement 6-month quarter Jan-Jun 2022	31 days indicator achievement 6-month quarter Jan-Jun 2022
Northland	90%	81%
Waitematā	90%	90%
Auckland	91%	90%
Counties Manukau	82%	86%
Waikato	64%	85%
Bay of Plenty	84%	85%
Lakes	97%	83%
Tairāwhiti	86%	84%
Taranaki	85%	87%
Whanganui	83%	87%
Hawkes Bay	87%	88%
MidCentral	90%	89%
Capital and Coast	85%	84%
Hutt Valley	88%	89%
Wairarapa	88%	86%
Nelson Marlborough	83%	86%
West Coast	54%	79%
Canterbury	89%	88%
South Canterbury	69%	72%
Southern	73%	86%
National total	84%	86%

APPENDIX 5: SURGICAL PROCEDURE CODES

Below is a list of the surgical procedure codes that were used for analysis on 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

BREAST CANCER SURGERY		
Clinical code	Block short description	Clinical code description
3152400	Subcutaneous mastectomy	Subcutaneous mastectomy, unilateral
3152401	Subcutaneous mastectomy	Subcutaneous mastectomy, bilateral
3151800	Simple mastectomy	Simple mastectomy, unilateral
3151801	Simple mastectomy	Simple mastectomy, bilateral