

**Table 1:** Demographics of gastric cancer cohort (2002–2021) by ethnicity.

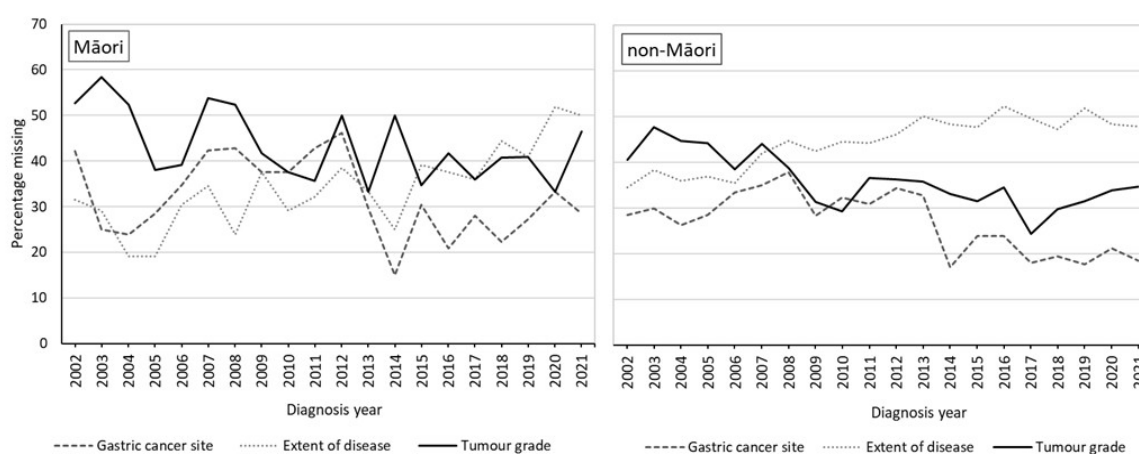
	Ethnicity					
Demographics	Māori		Non-Māori		Total	
	n	%	n	%	N	%
<b>Total diagnosed</b>	1,452		6,402		7,851	
<b>Diagnosis year</b>						
2002–2006	327	22.5	1,557	24.3	1,884	24
2007–2011	372	25.6	1,515	23.7	1,887	24
2012–2016	360	24.8	1,587	24.8	1,947	24.8
2017–2021	393	27.1	1,740	27.2	2,133	27.2
<b>Ethnicity (multiple response; binary variables)</b>						
Māori	1,452	100.0	-	-	1,452	18.5
Pacific	33	2.3	666	10.4	702	8.9
Asian	9	0.6	594	9.3	603	7.7
MELAA	S	S	54	0.8	54	0.7
NZ European	372	25.6	5,178	80.9	5,547	70.7
<b>Age at diagnosis</b>						
<45 years	261	18.0	327	5.1	588	7.5
45–64 years	594	40.9	1,779	27.8	2,370	30.2
65–84 years	564	38.8	3,498	54.6	4,062	51.7
85+ years	30	2.1	795	12.4	828	10.5
<b>Sex at diagnosis</b>						
Female	627	43.2	2,232	34.9	2,859	36.4
Male	822	56.6	4,167	65.1	4,992	63.6
<b>NZDep at diagnosis</b>						
Quintile 1 (least deprived)	93	6.4	1,146	18.0	1,236	15.8
Quintile 2	135	9.3	1,269	19.9	1,398	17.9
Quintile 3	195	13.4	1,317	20.7	1,512	19.3
Quintile 4	312	21.4	1,359	21.3	1,671	21.4
Quintile 5 (most deprived)	720	49.5	1,287	20.2	2,004	25.6
<b>GCH at diagnosis</b>						
U1 (most urban)	648	44.6	3,942	62.0	4,590	58.9

**Table 1 (continued):** Demographics of gastric cancer cohort (2002–2021) by ethnicity.

Demographics	Ethnicity					
	Māori		Non-Māori		Total	
U2	393	27.1	1,164	18.3	1,557	20.0
R1	210	14.5	819	12.9	1,029	13.2
R2	153	10.5	369	5.8	525	6.7
R3 (most rural)	42	2.9	54	0.8	99	1.3

MELAA = Middle Eastern, Latin American and African; S = suppressed count under six; NZDep = New Zealand Index of Deprivation; GCH = Geographical Classification for Health. NZDep quintile was unknown for 27 cases in total (27 non-Māori and S Māori). GCH was unknown for 54 cases (48 non-Māori and S Māori).

**Figure 1:** Percentage of missing data in the New Zealand Cancer Registry for clinical characteristics of those diagnosed with gastric cancer between 2002 and 2021, for Māori (left) and non-Māori (right).



**Table 2:** Disease-specific information for gastric cancer cases (2002–2021) by 5-year period of diagnosis and ethnicity (Māori and non-Māori) for those with no data missingness.

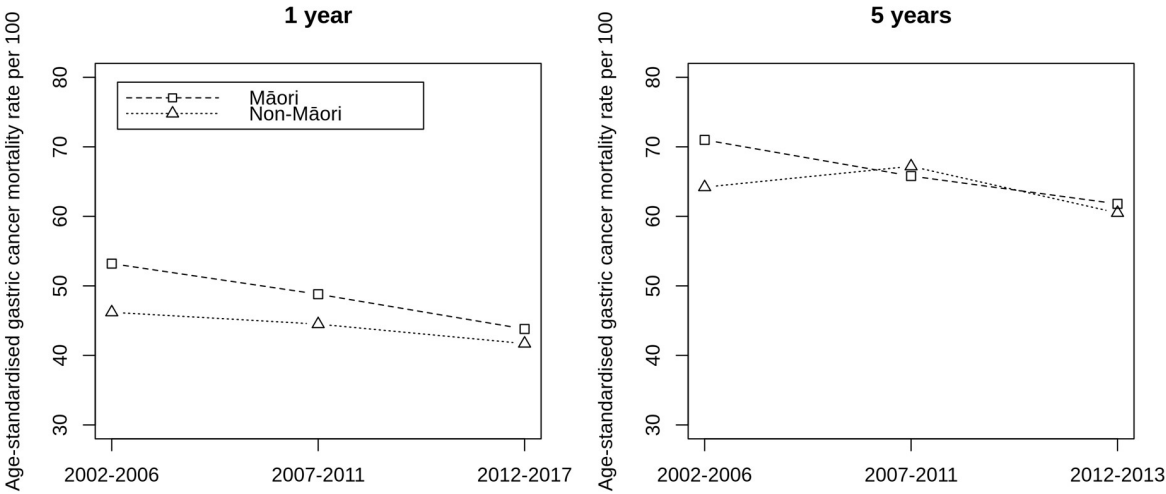
	2002–2021						2002–2006				2007–2011				2012–2016				2017–2021			
Disease specifics	Total		Māori		Non-Māori		Māori		Non-Māori		Māori		Non-Māori		Māori		Non-Māori		Māori		Non-Māori	
	n	col %	n	col %	n	col %	n	col %	n	col %	n	col %	n	col %	n	col %	n	col %	n	col %	n	col %
<b>Gastric cancer site</b>																						
Total specified	5,685		981		4,701		222		1,104		225		1,017		252		1,173		285		1,407	
Cardia	2,466	43.4	177	18.0	2,289	48.7	33	14.9	486	44.0	39	17.3	495	48.7	51	20.2	618	52.7	51	17.9	690	49.0
Proximal	900	15.8	195	19.9	708	15.1	33	14.9	186	16.8	33	14.7	120	11.8	51	20.2	162	13.8	78	27.4	234	16.6
Distal	1,278	22.5	342	34.9	936	19.9	90	40.5	231	20.9	75	33.3	225	22.1	87	34.5	234	19.9	90	31.6	249	17.7
Other description	1,041	18.3	267	27.2	771	16.4	66	29.7	201	18.2	78	34.7	171	16.8	60	23.8	165	14.1	60	21.1	234	16.6
<b>Extent of disease</b>																						
Total specified	4,500		951		3,549		243		993		255		855		237		810		213		888	
Localised	732	16.3	165	17.4	567	16.0	45	18.5	174	17.5	42	16.5	114	13.3	48	20.3	105	13.0	27	12.7	171	19.3
Regional	1,185	26.3	249	26.2	933	26.3	78	32.1	351	35.3	78	30.6	252	29.5	54	22.8	165	20.4	42	19.7	171	19.3
Distant	2,586	57.5	537	56.5	2,049	57.7	123	50.6	471	47.4	132	51.8	489	57.2	135	57.0	540	66.7	144	67.6	546	61.5
<b>Tumour grade (differentiation)</b>																						
Total specified	4,920		825		4,098		168		882		204		972		213		1,044		240		1,197	
Well	351	7.1	57	6.9	294	7.2	9	5.4	51	5.8	15	7.4	45	4.6	9	4.2	72	6.9	24	10.0	126	10.5

**Table 2 (continued):** Disease-specific information for gastric cancer cases (2002–2021) by 5-year period of diagnosis and ethnicity (Māori and non-Māori) for those with no data missingness.

Disease specifics	2002–2021				2002–2006				2007–2011				2012–2016				2017–2021					
	Total		Māori		Non-Māori		Māori		Non-Māori		Māori		Non-Māori		Māori		Non-Māori		Māori		Non-Māori	
Moderate	1,512	30.7	171	20.7	1,341	32.7	30	17.9	303	34.4	60	29.4	315	32.4	42	19.7	324	31.0	39	16.3	399	33.3
Poor/undifferentiated	3,054	62.1	597	72.4	2,460	60.0	132	78.6	528	59.9	129	63.2	612	63.0	159	74.6	645	61.8	177	73.8	672	56.1
<b>Basis of diagnosis</b>																						
Total specified	7,851		1,452		6,402		327		1,557		372		1,515		360		1,587		393		1,740	
Suspicion of cancer	201	2.6	27	1.9	174	2.7	S	S	45	2.9	6	1.6	57	3.8	6	1.7	42	2.6	9	2.3	30	1.7
Some evidence of cancer	417	5.3	60	4.1	357	5.6	15	4.6	99	6.4	18	4.8	102	6.7	9	2.5	84	5.3	15	3.8	75	4.3
Confirmed cancer	7,233	92.1	1,365	94	5,871	91.7	306	93.6	1,413	90.8	348	93.5	1,359	89.7	342	95.0	1,461	92.1	369	93.9	1,638	94.1

Suspicion of cancer = death certificate or clinical only. Some evidence of cancer = clinical investigation or exploratory surgery/autopsy. Confirmed cancer = haematological, cytological or histological report.  
col % = column %.

**Figure 2:** Age-standardised gastric cancer mortality for Māori and non-Māori with gastric cancer in different periods up to 5 years post-diagnosis.



**Table 3:** Crude and age-standardised mortality rates per 100 persons (all-cause and underlying cause of death of gastric cancer) by year of gastric cancer diagnosis and ethnicity.

Time period	Māori				Non-Māori				Māori:non-Māori ratio of ASRs		
	N	n	Crude rate	ASR	N	n	Crude rate	ASR	RR	95% CI	
<b>All-cause mortality within 1 year of gastric cancer diagnosis</b>											
2002–2006	327	192	58.7	56.1	1,557	921	59.2	50.5	1.11	0.85	1.46
2007–2011	372	198	53.2	51.0	1,515	843	55.6	47.9	1.06	0.81	1.41
2012–2016	360	189	52.5	45.9	1,587	855	53.9	44.5	1.03	0.75	1.42
2017–2021	393	207	52.7	45.2	1,743	774	44.4	38.3	1.18	0.87	1.59
<b>Gastric cancer mortality within 1 year of gastric cancer diagnosis</b>											
2002–2006	327	180	55.0	53.2	1,557	843	54.1	46.2	1.15	0.87	1.53
2007–2011	372	180	48.4	48.8	1,515	762	50.3	44.5	1.10	0.82	1.47
2012–2017	435	204	46.9	43.8	1,920	909	47.3	41.7	1.05	0.77	1.42
<b>All-cause mortality within 2 years of gastric cancer diagnosis</b>											
2002–2006	327	234	71.6	56.8	1,557	1,110	71.3	54.4	1.05	0.83	1.35
2007–2011	372	246	66.1	62.6	1,515	1,047	69.1	61.4	1.02	0.80	1.31
2012–2016	360	246	68.3	58.9	1,587	1,062	66.9	56.9	1.04	0.78	1.37
2017–2020	309	198	64.1	58.2	1,332	801	60.1	53.8	1.08	0.80	1.46
<b>Gastric cancer mortality within 2 years of gastric cancer diagnosis</b>											
2002–2006	327	222	67.9	64.9	1,557	1020	65.5	59.2	1.10	0.85	1.41
2007–2011	372	228	61.3	60.0	1,515	945	62.4	57.6	1.04	0.81	1.35
2012–2016	360	228	63.3	56.9	1,587	942	59.4	53.5	1.06	0.80	1.42
<b>All-cause mortality within 3 years of gastric cancer diagnosis</b>											
2002–2006	327	249	76.1	71.1	1,557	1,182	75.9	68.3	1.04	0.82	1.32
2007–2011	372	264	71.0	65.9	1,515	1,152	76.0	69.3	0.95	0.75	1.20
2012–2016	360	264	73.3	61.6	1,587	1,158	73.0	60.2	1.02	0.78	1.33
2017–2019	225	162	72.0	66.4	981	666	67.9	58.6	1.13	0.81	1.58
<b>Gastric cancer mortality within 3 years of gastric cancer diagnosis</b>											
2002–2006	327	237	72.5	67.8	1,557	1,083	69.6	62.7	1.08	0.85	1.38
2007–2011	372	240	64.5	62.9	1,515	1,032	68.1	65.3	0.96	0.75	1.23
2012–2015	288	195	67.7	61.6	1,248	807	64.7	59.1	1.04	0.77	1.41

**Table 3 (continued):** Crude and age-standardised mortality rates per 100 persons (all-cause and underlying cause of death of gastric cancer) by year of gastric cancer diagnosis and ethnicity.

Time period	Māori				Non-Māori				Māori:non-Māori ratio of ASRs		
	N	n	Crude rate	ASR	N	n	Crude rate	ASR	RR	95% CI	
<b>All-cause mortality within 5 years of gastric cancer diagnosis</b>											
2002–2006	327	261	79.8	74.6	1,557	1,236	79.4	70.4	1.06	0.84	1.34
2007–2011	372	291	78.2	70	1,515	1,215	80.2	72.5	0.96	0.77	1.21
2012–2016	360	279	77.5	64.4	1,587	1,239	78.1	64.9	0.99	0.77	1.29
2017	75	57	76.0	68.8	333	246	73.9	76.3	0.90	0.48	1.70
<b>Gastric cancer mortality within 5 year of gastric cancer diagnosis</b>											
2002–2006	327	246	75.2	71.0	1,557	1,113	71.5	64.2	1.10	0.87	1.41
2007–2011	372	258	69.4	65.8	1,515	1,071	70.7	67.2	0.98	0.77	1.25
2012–2013	156	114	73.1	61.8	600	420	70.0	60.5	1.02	0.69	1.52

Data correspond to Figure 1 and 2. Diagnosis period groupings vary in relation to mortality data availability (e.g., mortality diagnosis information is available up to 2018) to allow full tracking of mortality over the specified period. ASR = age-standardised gastric cancer mortality rates; RR = rate ratio; 95 CI = 95% confidence interval.

**Table 4:** Deaths from gastric cancer within 1–5 years of gastric cancer diagnosis among Māori and non-Māori by age, including crude and age-standardised RR.

	Māori			Non-Māori			Māori:Non-Māori RR			
	N	n	Crude rate	N	n	Crude rate	est.	95% CI		
<b>Diagnosed with gastric cancer in 2002–2017 and died within 1 year of diagnosis</b>										
<i>Age group</i>										
<45	213	102	47.9	240	102	42.5	1.10	0.83	1.46	
45–64	459	216	47.1	1,392	570	40.9	1.15	0.98	1.34	
65–84	438	228	52.1	2,727	1,395	51.2	1.02	0.88	1.17	
85+	24	18	75.0	633	447	70.6	1.17	0.70	1.85	
<b>Total age standardised</b>			48.5				44.0	1.10	0.93	1.30
<b>Diagnosed with gastric cancer in 2002–2013 and died within 5 years of diagnosis</b>										
<i>Age group</i>										
<45	174	108	62.1	186	117	62.9	1.00	0.76	1.31	
45–64	339	246	72.6	987	651	66.0	1.11	0.95	1.28	

**Table 4 (continued):** Deaths from gastric cancer within 1–5 years of gastric cancer diagnosis among Māori and non-Māori by age, including crude and age-standardised RR.

	Māori			Non-Māori			Māori:Non-Māori RR		
	N	n	Crude rate	N	n	Crude rate	est.	95% CI	
65–8	324	243	75.0	2,025	1,443	71.3	1.06	0.93	1.22
85+	18	15	83.3	468	393	84.0	0.99	0.55	1.66
<b>Total age standardised</b>			67.3			65.0	1.04	0.89	1.21

Cause of death information was available to 2018.

N=4,279.

RR = rate ratio; est. = estimate; 95% CI = 95% confidence interval.

**Table 5:** Deaths from gastric cancer within 1–5 years of gastric cancer diagnosis among Māori and non-Māori by NZDep, GCH and sex, including crude and age-standardised RR.

	Māori			Non-Māori			Māori:non-Māori RR			ASRR		
	N	n	Crude rate	N	n	Crude rate	est.	95% CI	est.	95% CI		
<b>Diagnosed with gastric cancer in 2002–2017 and died within 1 year of diagnosis</b>												
<i>NZDep quintile</i>												
1	78	36	46.2	855	414	48.4	0.91	0.62	1.29	1.06	0.61	1.79
2	108	60	55.6	981	438	44.6	1.28	0.96	1.68	1.42	0.87	2.30
3	156	81	51.9	1,056	561	53.1	0.97	0.76	1.23	1.08	0.71	1.61
4	240	117	48.8	1,068	567	53.1	0.92	0.75	1.12	1.09	0.75	1.61
5	549	270	49.2	981	522	53.2	0.93	0.80	1.07	1.03	0.78	1.39
<i>GCH</i>												
U1	495	246	49.7	3,048	1,479	48.5	1.02	0.88	1.16	1.10	0.88	1.37
U2	303	144	47.5	924	495	53.6	0.89	0.74	1.08	1.13	0.77	1.68
R1	171	84	49.1	642	339	52.8	0.92	0.72	1.18	0.98	0.58	1.70
R2–R3	159	87	54.7	333	189	56.8	1.01	0.77	1.30	0.85	0.40	2.06
<i>Sex</i>												
Female	501	234	46.7	1,752	942	53.8	0.87	0.75	1.01	0.99	0.78	1.27
Male	636	330	51.9	3,240	1,572	48.5	1.07	0.95	1.20	1.18	0.94	1.49
<b>Diagnosed with gastric cancer in 2002–2013 and died within 5 years of diagnosis</b>												
<i>NZDep quintile</i>												
1	54	39	72.2	621	426	68.6	1.02	0.71	1.42	1.13	0.68	1.82

**Table 5 (continued):** Deaths from gastric cancer within 1–5 years of gastric cancer diagnosis among Māori and non-Māori by NZDep, GCH and sex, including crude and age-standardised RR.

	Māori			Non-Māori			Māori:non-Māori RR			ASRR		
	N	n	Crude rate	N	n	Crude rate	est.	95% CI		est.	95% CI	
2	69	57	82.6	714	495	69.3	1.15	0.86	1.52	1.22	0.72	2.01
3	111	78	70.3	783	564	72.0	0.98	0.77	1.24	0.94	0.63	1.37
4	189	135	71.4	795	573	72.1	0.99	0.81	1.19	0.92	0.65	1.31
5	420	303	72.1	717	528	73.6	0.97	0.84	1.12	1.05	0.81	1.37
<i>GCH</i>												
U1	363	255	70.2	2,241	1,548	69.1	1.02	0.89	1.17	1.03	0.83	1.26
U2	234	174	74.4	681	513	75.3	0.98	0.82	1.17	1.03	0.72	1.50
R1	123	87	70.7	465	339	72.9	0.96	0.75	1.22	0.98	0.61	1.59
R2–R3	129	96	74.4	243	186	76.5	0.98	0.76	1.26	0.81	0.40	1.87
<i>Sex</i>												
Female	390	267	68.5	1,293	933	72.2	0.95	0.82	1.09	0.98	0.78	1.24
Male	465	351	75.5	2,376	1,668	70.2	1.07	0.95	1.20	1.07	0.87	1.33

Cause of death information was available to 2018.

N=7,796.

NZDep = New Zealand Index of Deprivation; GCH = Geographical Classification for Health; RR = rate ratio; ASRR = age-standardised rate ratio; est. = estimate; 95% CI = 95% confidence interval.