

Figure 1: Number of cases of venoarterial (VA) extracorporeal membrane oxygenation (ECMO) per year. Only full calendar years are shown. Between 19 September 2017 and 31 December 2017 there were six cases. Between 1 January 2024 and 29 June 2024 there were 15 cases.

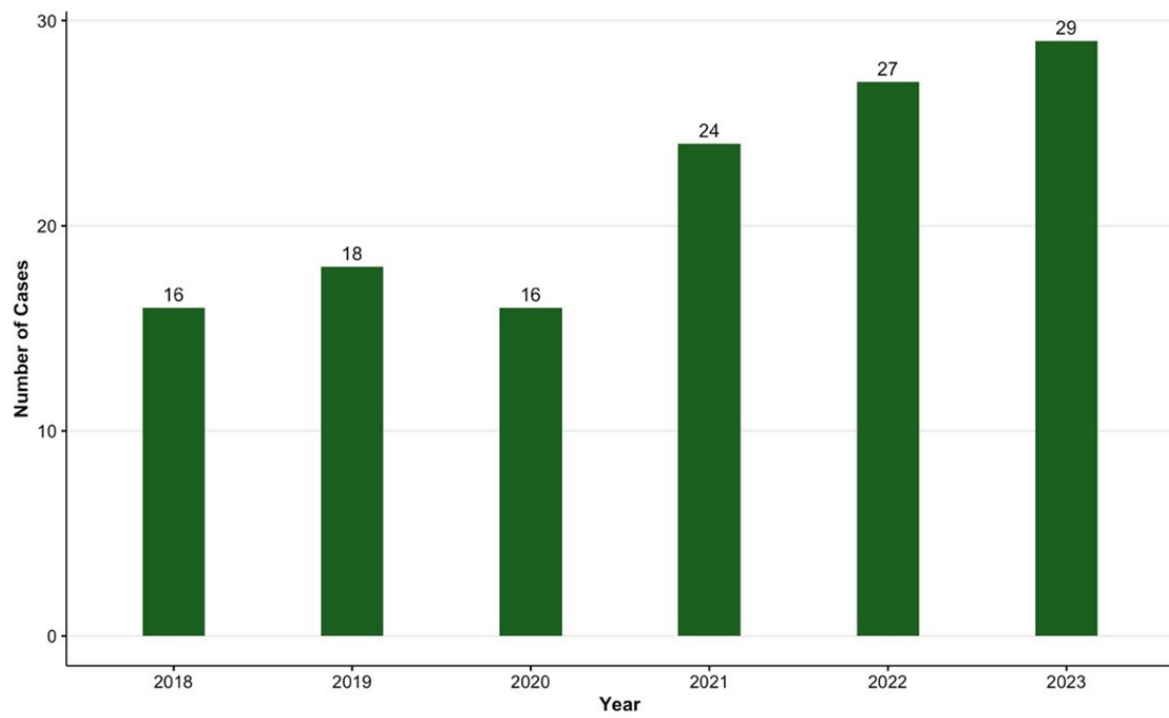


Table 1: Ethnicity. Column one shows the primary ethnicity for the cohort of New Zealand–domiciled patients. Column two shows the ethnic distribution of the New Zealand population from the 2023 Census.¹⁴ Note the total percentage for column two is 115%, which reflects the fact that people can list more than one ethnic affiliation on the census form. Percentages are rounded to integer values.

	N=142 (%)	Proportion of New Zealand population (%)
European	64 (45)	68
Māori	31 (22)	18
Pacific peoples	22 (15)	9
Asian	19 (13)	17
MELAA	4 (3)	2
Other	2 (1)	1

MELAA = Middle Eastern, Latin American, African.

Table 2: Geographic location. Column one shows the geographic location for the cohort of New Zealand–domiciled patients. Column two shows the geographic distribution of New Zealand–domiciled people from the 2023 Census.¹⁴ Percentages are rounded to integer values.

	N=142 (%)	Proportion of New Zealand population (%)
Northern	92 (65)	39
Greater Auckland	85 (60)	35
Northland	7 (5)	4
Midland (Te Manawa Taki)	23 (16)	20
Waikato	15 (11)	9
Bay of Plenty	5 (4)	5
Tairāwhiti	1 (1)	1
Rotorua and Taupō	1 (1)	2
Taranaki	1 (1)	3
Central (Te Ikaroa)	14 (10)	18
Wellington, Kāpiti and Hutt Valley	8 (6)	9
Hawke’s Bay	3 (2)	3
Manawatū, Horowhenua and Taranaki	1 (1)	4
Whanganui	2 (1)	1
Wairarapa	0	1
South Island (Te Waipounamu)	13 (9)	24
Canterbury	6 (4)	12
South Canterbury	0	1
Nelson Marlborough	3 (2)	3
West Coast	0	1
Otago and Southland	4 (3)	7

Table 3: Indications for venoarterial (VA) extracorporeal membrane oxygenation (ECMO). Percentages are rounded to integer values.

Indication	N=151 (%)
Cardiac surgery	94 (62)
Non-transplant cardiac surgery	54 (36)
Cardiac transplant	25 (17)
Lung transplant	15 (10)
Cardiogenic shock and decompensated heart failure	46 (30)
Fulminant myocarditis	11 (7)
Decompensated chronic heart failure	12 (8)
Acute ischaemic cardiogenic shock	13 (9)
Pulmonary embolus	8 (5)
Cardiotoxic drugs	2 (1)
Other	11 (7)
Septic shock	3 (2)
Drowning	2 (1)
Pulmonary haemorrhage	2 (1)
Hypoxic cardiac arrest	2 (1)
Hypertensive crisis	1 (1)
Amniotic fluid embolism	1 (1)

Table 4: Survival at 1 year by age, sex, ethnicity and indication. Percentages are rounded to integer values.

		N	Alive at 12 months (%)
All patients		151	80 (53)
Age			
	≤16	4	3 (75)
	17–29	27	19 (70)
	30–49	53	27 (51)
	50–65	56	28 (50)
	≥65	11	3 (27)
Sex			
	Male	94	50 (53)
	Female	57	30 (53)
Ethnicity			
	European	64	37 (58)
	Māori	31	19 (61)
	Pacific peoples	30	12 (40)
	Asian	20	9 (45)
	MELAA	4	1 (25)
	Other	2	1 (50)
Indication			
<i>Cardiac surgery</i>		94	50 (53)
	Non-transplant	54	20 (40)
	Cardiac transplant	25	18 (72)
	Lung transplant	15	12 (80)
<i>Non-cardiac surgery</i>		46	23 (50)
	Fulminant myocarditis	11	4 (36)
	Decompensated heart failure	12	9 (75)
	Acute ischaemia	13	5 (38)
	Pulmonary embolus	8	5 (62)
	Cardiotoxic drugs	2	0 (0)
Other		11	7 (64)

MELAA = Middle Eastern, Latin American, African.

Table 5: Predictors of mortality within 1 year. An odds ratio (OR) >1 indicates increased mortality within 1 year.

Variable	OR (95% CI)	p-value
Age (years)	1.03 (1.01–1.05)	0.01
Duration of VA ECMO (days)	1.07 (0.99–1.17)	0.08
Sex (male relative to female)	0.97 (0.51–1.90)	0.95
Ethnicity (relative to European)		
Māori	0.87 (0.35–2.07)	0.75
Pacific peoples	2.06 (0.86–5.07)	0.11
Asian	1.67 (0.61–4.70)	0.32
ECPR (relative to no ECPR)	2.88 (1.24–7.17)	0.02
Indication:		
Non-cardiac surgery (relative to cardiac surgery)	1.14 (0.56–2.31)	0.72
Indication: cardiac surgery		
Heart transplant (relative to non-transplant cardiac surgery)	0.23 (0.08–0.62)	0.005
Lung transplant (relative to non-transplant cardiac surgery)	0.15 (0.03–0.53)	0.006

ECPR = extracorporeal resuscitation; CI = confidence interval; VA ECMO = venoarterial extracorporeal membrane oxygenation.