Auckland Region Vascular Atlas user guide IV: Ring maps

This user guide is divided into 3 short sections. By the end of this quick guide, you will be able to:

A. Navigate through the user interface and controls ;
B. Display different data sets and view corresponding visuals;
C. Display useful combinations of data for analysis

A. Basic User Interface and Controls → **B. Display Different Data Sets** → **C. Useful Combinations for Analysis**

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Video Demonstrations
Click link below to watch video

1. Overview of basic controls and display option (4:20)   2. Examples of useful configurations for ring maps (3:15)

A: Basic User Interface and Controls

General Controls
Hover cursor to highlight data. **Left click** to select data. **Right click** displays menu on screen, including *Clear Selection* and *Clear Filter* to start over.

Map shows 3 levels of geography
Auckland Region, District Health Board (DHB), and General Electoral Districts (GEDs). Data displayed in multiple forms (map, table, pie, bar, line charts).

❽ Filter Button
Contains pre-set selections to display data for DHBs and GEDs only.

Filter Explorer
▼ DHB
  Auckland DHB
  Counties Manukau
  Waitemata DHB
  Remove Filter
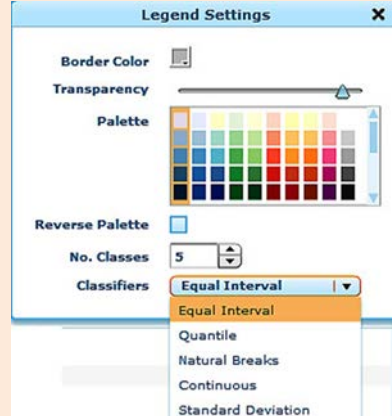
❶ Data Panel
Changes data displayed on map. **Click ►** to expand grouping. Selection of a variable will be displayed on the map panel. **Click** to select the variable or hover to highlight. Click **–** or **+** to collapse or expand all.

❷ Legend and Pie Chart
Click to display legend class or pie segment on map. **Click** ✎ to open legend settings panel

Legend Settings
- Border Color
- Transparency
- Palette
- Reverse Palette
- No. Classes: 5
- Classifiers: Equal Interval
  - Equal Interval
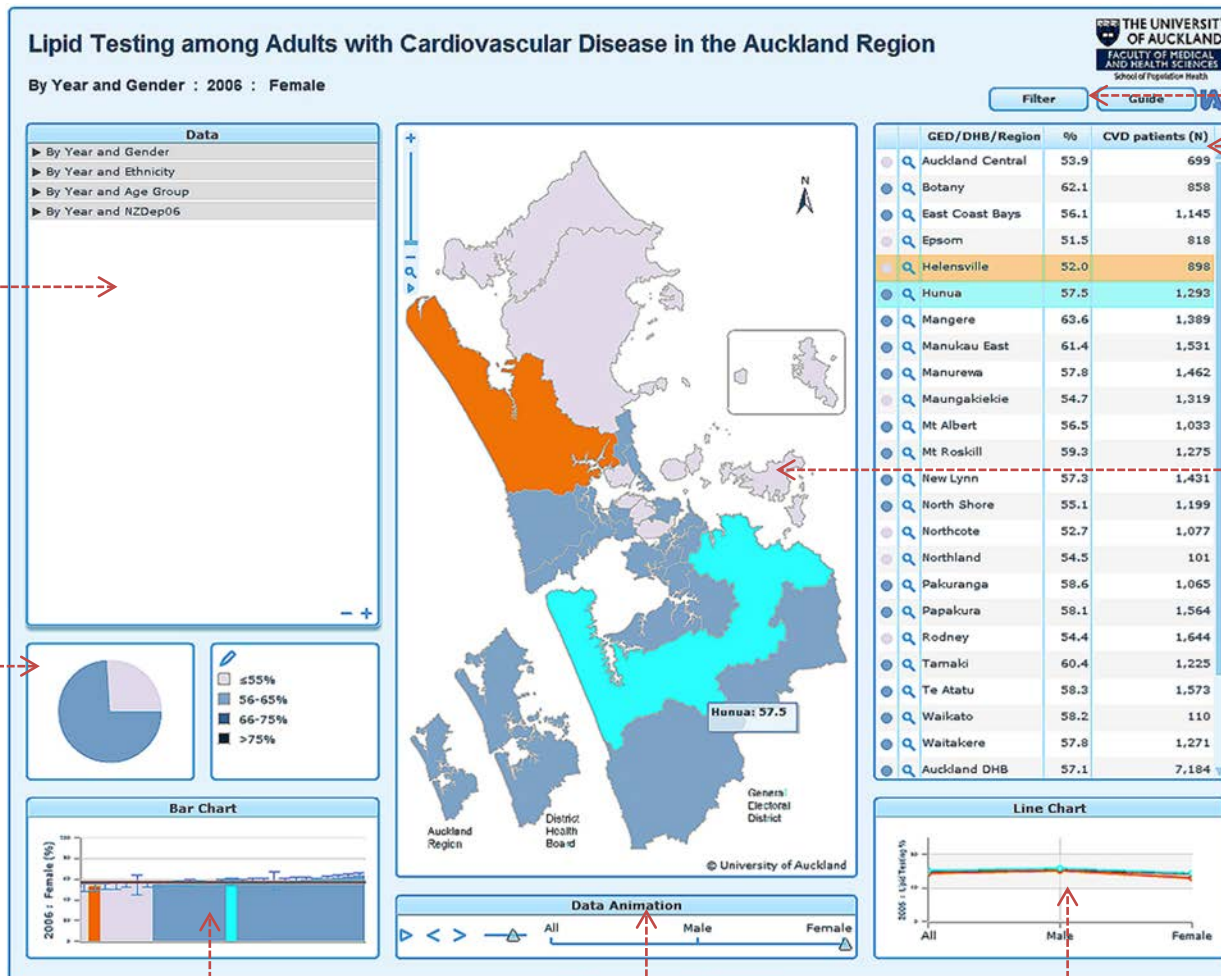 - Quantile
  - Natural Breaks
  - Continuous
  - Standard Deviation

NB: classifiers alter the methodology for breaking and grouping data.
All windows/panels can be resized and moved around the screen.

Lipid Testing among Adults with Cardiovascular Disease in the Auckland Region
By Year and Gender : 2006 : Female

THE UNIVERSITY OF AUCKLAND
FACULTY OF MEDICAL AND HEALTH SCIENCES
School of Population Health

Filter   Guide

Data
- ► By Year and Gender
- ► By Year and Ethnicity
- ► By Year and Age Group
- ► By Year and NZDep06

GED/DHB/Region	%	CVD patients (N)
Auckland Central	53.9	699
Botany	62.1	858
East Coast Bays	56.1	1,145
Epsom	51.5	818
Helensville	52.0	898
Hunua	57.5	1,293
Mangere	63.6	1,389
Manukau East	61.4	1,531
Manurewa	57.8	1,462
Maungakiekie	54.7	1,319
Mt Albert	56.5	1,033
Mt Roskill	59.3	1,275
New Lynn	57.3	1,431
North Shore	55.1	1,199
Northcote	52.7	1,077
Northland	54.5	101
Pakuranga	58.6	1,065
Papakura	58.1	1,564
Rodney	54.4	1,644
Tamaki	60.4	1,225
Te Atatu	58.3	1,573
Waikato	58.2	110
Waitakere	57.8	1,271
Auckland DHB	57.1	7,184

Legend:
- ☐ ≤55%
- ☐ 56-65%
- ☐ 66-75%
- ☐ >75%

Hunua: 57.5

General Electoral District

Auckland Region

District Health Board

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Bar Chart
2006 : Female (%)

Data Animation
▷ < > All   Male   Female

Line Chart
2006 : Lipid Testing %
All   Male   Female

❼ Tabular Data Panel
Contains all data for all areas (% and *n* value). Make single or multiple selections.

❻ Map Panel
Click to select a GED, DHB or region. The mouse wheel can be used to **Zoom** in and out. **Click ▷** to open the menu.

- Clear Selection
- Filter Selection
- Clear Filter
- Print Preview
- Export
- Reset Layout
- Add Text
- Add Shape

NB: Map shows 3 levels of geography.

❸ Bar Chart
Hover to see the mean, and upper and lower limit for each GED. **Click** on a bar to display the selection of on the map. **Hold Ctrl+** to select multiple mesh-blocks. Red line — indicates Auckland regional mean.
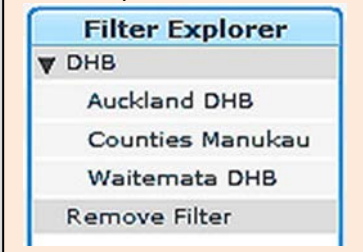
❹ Data Animation
Plays an animation of different sub-groups within a data category. Click ▷ to play, < > to move back/forward one variable. Click △ to adjust speed.

❺ Line Chart
Shows selected or highlighted data as line plots. Red line indicates Auckland regional mean.

Video Demonstration
1. Overview of basic controls and display option (4:20)

B: Display Different Data Sets

⑩-1 Explore the Data Panels
Ringmap Data (above) and Cartogram Data (below)

Data are grouped into themes. Expand them to explore different indicators using different variables. Selections made will appear on corresponding maps, tables, and charts.
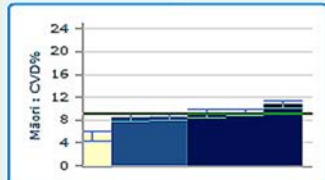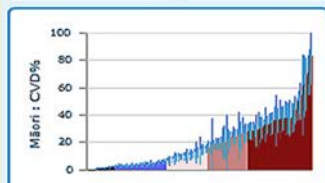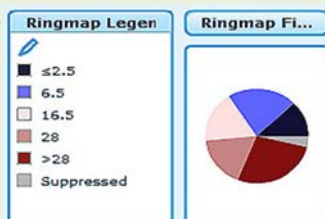
Ringmap Data
- ▼ Māori
  - ▼ Lipid Testing Percentage (%)
    - Lipid%
  - ▶ CVD Patient Distribution (%)
- ▶ Pacific
- ▼ Indian
  - ▶ Lipid Testing Percentage (%)
  - ▶ CVD Patient Distribution (%)
- ▶ NZEO

– +

Cartogram Data
- ▶ Maori
- ▼ Pacific
  - ▶ Lipid Testing Percentage (%)
  - ▶ CVD Patient Distribution (%)
- ▶ Indian
- ▼ NZEO
  - ▶ Lipid Testing Percentage (%)

⑩-2 Select Data from Charts

Data can be further filtered using legend, chart, graph or GED/DHB filters. NB: **Hold ctrl+ or shift+** to make multiple selections.

Ringmap Legen / **Ringmap Fi...**

Legend:
- ■ ≤2.5
- ■ 6.5
- □ 16.5
- ■ 28
- ■ >28
- ■ Suppressed

Māori : CVD%
100 / 80 / 60 / 40 / 20 / 0

Cartogram Leg / **Cartogram...**

Legend:
- □ ≤6
- ■ 6.5
- ■ 7.5
- ■ 8.5
- ■ >8.5

Māori : CVD%
24 / 20 / 16 / 12 / 8 / 4 / 0

⑨ Ring Map Symbology

Ringmap Symbology

Outer-ring = Value for Auckland region
Inner Rings = Value for individual GEDs
Ring colour = Legend classification
Ring Segment = Age groups
Ring Order = Least deprived (inner ring), most deprived (outer ring).

Cartogram Symbology

GED surface area correlates to population value (population size).

General Display Options
For pie charts, legends, bar and line graphs, map GEDS, rings and tables. Clicking selection(s) and/or hovering cursor will generate a visualisation on charts, table, map, and rings, accordingly
(i.e. Orange = selected, blue = hovering cursor).

⑩-3 Visualise Selection in the Map

(ring map chart: age groups 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79; Male / Female; N)
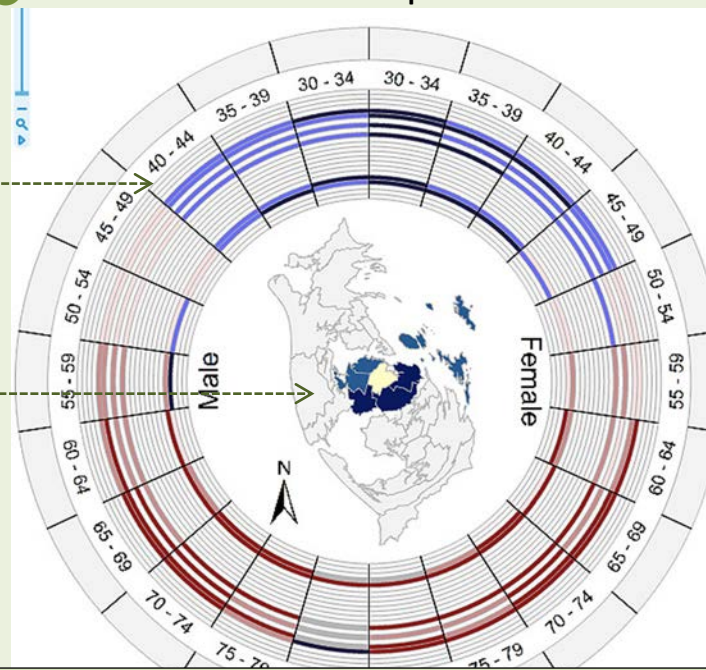
Example: Filter selection using Auckland DHB for both data sets

⑩-4 Explore the Tabular Data Panel
Tabular data corresponds to map. **Click ●** or click anywhere on the row to make a selections. **Click 🔍** to zoom to area (GED, DHB, and region) **Ctrl+ or Shift+** to select multiple rows.

Click category labels to sort table by value

% ▼	CVD patients (N)
68.5	3,475
68.0	20,900
67.8	289

Ringmap Table

Sector ▲	%	CVD Patients (N)
● Auckland C...	2.3	769
● Auckland C...	1.3	683
● Auckland C...	2.9	558
● Auckland C...	5.5	587
● Auckland C...	4.3	419
● Auckland C...	16.6	302
● Auckland C...	26.2	172
● Auckland C...	37.6	117
● Auckland C...	29.3	82
● Auckland C...	37.7	77
● Auckland C...	61.1	18
● Auckland C...	2.9	700
● Auckland C...	4	656
● Auckland C...	5.3	549
● Auckland C...	10	471

Cartogram Table

GED	%	CVD Patients (N)
● Tamaki	10.7	7,400
● Maunga...	9.2	12,...
● Mt Roskill	9.2	5,483
● Aucklan...	8.5	7,055
● Mt Albert	8.4	7,983
● Epsom	5.2	2,697

C: Useful Combinations for Analysis: Ring maps

⑪ **Find and display data based on demographic groups**

Ringmap Data
▼ Māori
 ▼ Lipid Testing Percentage (%)
  Lipid%
 ▼ CVD Patient Distribution (%)
  CVD%
▶ Pacific
▶ Indian
▶ NZEO

Expand Category
Reveal data sets for respective ethnicity

Select sub-category
Reveal data sets for respective indicators

Select Variable
Display data set for variable. I.e. Lipid and CVD rates

Cartogram Data
▶ Maori
▶ Pacific
▶ Indian
▼ NZEO
 ▼ Lipid Testing Percentage (%)
  Lipid%
 ▼ CVD Patient Distribution (%)
  CVD%

⑫ **Select Parts of Data – using different methods**
Extra filters can be applied to charts, maps and tables for both ringmap and cartogram.

A – Select by Classification using Pie Chart and Legend
E.g. Select GEDs with lipid rate of 40% ONLY for Maori.
E.g. Select GEDs with CVD of ≤6.0% and >8.5% ONLY for NZEO.

B – Select by 95% CI using bar Chart
E.g Select GEDs with values below Auckland mean ONLY.

C – Select by District Health Boards using Filter Button
E.g. Select GEDs belonging to Counties Manukau DHB ONLY.

Note: Click to make selection or **Ctrl+ click** to make multiple selections. Selection(s) will be highlighted in the tables and charts. **Right-click to 'Filter by Selection'. To cancel,** choose 'Clear Selection' at any time or select 'Remove Filter' from menu. ⑧

Ringmap Fi...
▼ DHB
 All DHBs
 Auckland DHB
 Counties Manukau
 Waitemata DHB
▼ GED
 Auckland Central
 Auckland Region
 Botany
 East Coast Bays
 Epsom
 Helensville

Cartogram...
▼ DHB
 Auckland DHB
 Counties Manukau
 Waitemata DHB
▼ GED
 Auckland Central
 Botany
 East Coast Bays
 Epsom
 Helensville
 Hunua
 Mangere

⑬ **See Patterns and Variations**
When ringmap data and cartogram data are both displayed for the same variables, e.g. CVD patient distribution % for Maori, then rings will show **demographic variations** while cartogram shows **geographic variations**.

Ring segments, GEDS, and charts are colour coded based on legend classification.

⑭ **Compare ring maps and cartograms**
Useful for comparing patterns and trends for two variables. Selections can be filtered down in each map to further show variation and patterns between data sets.

A – Compare ethnic groups
Using same variable for different ethnicities
B – Compare geography and demographic values
Compare GEDs belonging to a DHB to see the variation between two variables.
C – Compare patterns for gender
See variation between gender for different age groups based on deprivation

⑮ **Other Useful Configurations**

- Isolate individual GEDs and viewing all data for all gender and all age groups.

- Isolate DHB to see demographic variation for variable X and geographic variation for variable Y.

Tip: Select all relevant rows from the table panel (Ctrl+ or shift+) and filter selection (right click menu)

Video Demonstration

2. Examples of useful configurations for ring maps (3:15)
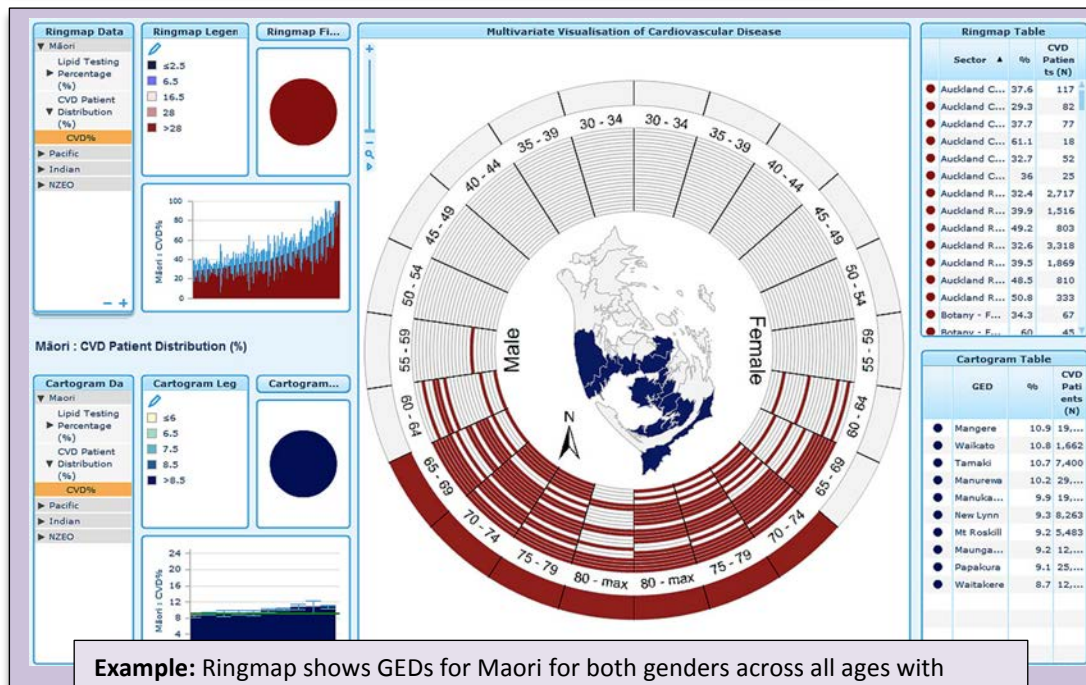
Example: Ringmap shows GEDs for Maori for both genders across all ages with highest distribution rates (red) and cartogram shows GEDs with highest overall CVD distribution rates (blue).

Ringmap Legend
■ ≤2.5
■ 6.5
■ 16.5
■ 28
■ >28

Ringmap Table

Sector ▲	%	CVD Patients (N)
Auckland C...	37.6	117
Auckland C...	29.3	82
Auckland C...	37.7	77
Auckland C...	61.1	18
Auckland C...	32.7	52
Auckland C...	36	25
Auckland R...	32.4	2,717
Auckland R...	39.9	1,516
Auckland R...	49.2	803
Auckland R...	32.6	3,318
Auckland R...	39.5	1,869
Auckland R...	48.5	810
Auckland R...	50.8	333
Botany - F...	34.3	67
Botany - F...	60	45

Māori : CVD Patient Distribution (%)

Cartogram Legend
□ ≤6
■ 6.5
■ 7.5
■ 8.5
■ >8.5

Cartogram Table

GED	%	CVD Patients (N)
Mangere	10.9	19,...
Waikato	10.8	1,662
Tamaki	10.7	7,400
Manurewa	10.2	29,...
Manuka...	9.9	19,...
New Lynn	9.3	8,263
Mt Roskill	9.2	5,483
Maunga...	9.2	12,...
Papakura	9.1	25,...
Waitakere	8.7	12,...

Multivariate Visualisation of Cardiovascular Disease