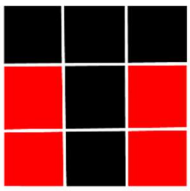


ToroCube User Guide

http://infovert.com/Pharmacovigilance.html

Table of Contents

Contents

Introduction

ToroCube is a web based charting interface that can be a standalone application or be embedded in virtually any other web application.

TotCube comes in 2 versions: ToroCube and ToroCube PV (Pharmacovigilance).

ToroCube is configured using ToroAdmin (see ToroAdmin User Guide).

ToroCube has the following charts available but not all may have been made available for your application by the admin (using ToroAdmin)

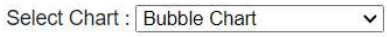
Chart Types:

Graph Type	Operations available	ToroCube	ToroCube Pharma
Bubble Chart	Sum, Count, Average, Minimum, Maximum	✓	✓
Doughnut Chart (Multi Series)	Sum, Count, Average, Minimum, Maximum	✓	✓
Geo Map	Sum, Count, Average, Minimum, Maximum	✓	✓
Horizontal Bar chart	Sum, Count, Average, Minimum, Maximum	✓	✓
Line Chart	Sum, Count, Average, Minimum, Maximum	✓	✓
Multi-Dimensional Grid	Sum	✓	✓
Multi-Dimensional Matrix	Sum	✓	✓
Pie Chart (Multi Series)	Sum, Count, Average, Minimum, Maximum	✓	✓
Polar Chart	Sum, Count, Average, Minimum, Maximum	✓	✓
Radar Chart	Sum, Count, Average, Minimum, Maximum	✓	✓
Scatter Chart	Sum, Count, Average, Minimum, Maximum	✓	✓
Tree Chart	Sum, Count, Average, Minimum, Maximum	✓	✓
Venn Diagram	Sum	✓	✓
Vertical Bar Chart	Sum, Count, Average, Minimum, Maximum	✓	✓
Disproportionately Analysis between two drugs	N/A		✓
Dynamic PRR Report	N/A		✓
Signals of Disproportionate Reporting	N/A		✓

Charts

Bubble Chart

Select the chart from the chart list on the interface:

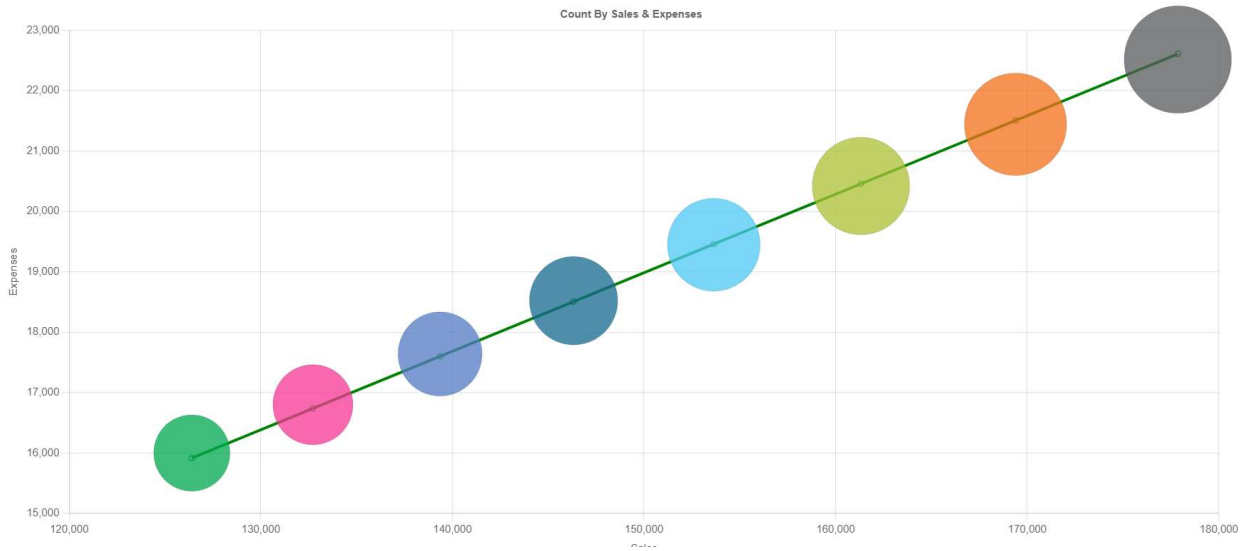


A bubble chart needs at least three facts (data that is measured). One of the measures is plotted on the X axis, and the other on the Y axis. The last selected measure (Z-axis) determines the relative size of the bubble.

Open the Configuration panel by clicking on the first tab to the right: 
For filtering data, see section “Filtering Data”
You can select the dimensions to plot.

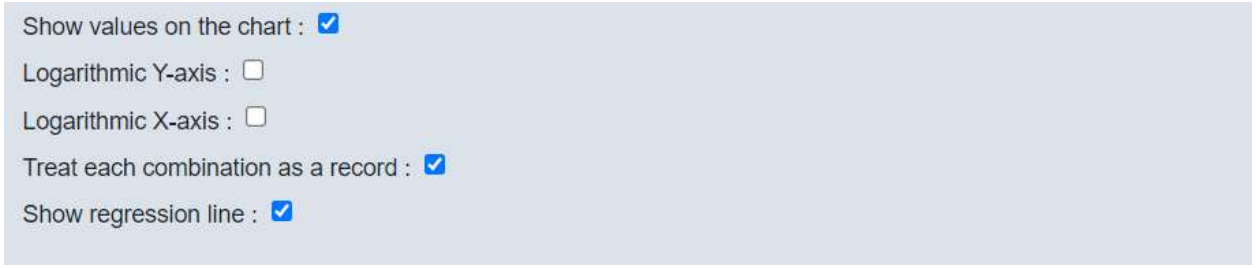
“Identifier” is the dimension the numbers will be picked from.
“Z-Axis” will be reflected in the size of the bubble.

Picking Top “N”
For any dimension, you can focus on the top “N” of data.
For example, you have a list of countries where applications have come from. This can be a very large list, while you are only interested I the top 2 countries.
You can set the “Count for the top” to “2”.
You will see only three segmentations in the chart: Two for the top 2 values and one labelled “Others”. This will be the sum of applications from all values that are not part of the top two.



Bubble Chart, with Regression Line

Other options



"Show values on the chart" show the numbers on the chart
The user can also switch the X-axis and the Y axis from linear to logarithmic by selecting "Logarithmic X-axis" and "Logarithmic Y-axis"
See section "Data with multiple concurrent values" for the option "Treat each combination as a record"
To plot a regression line, select "Show regression line"

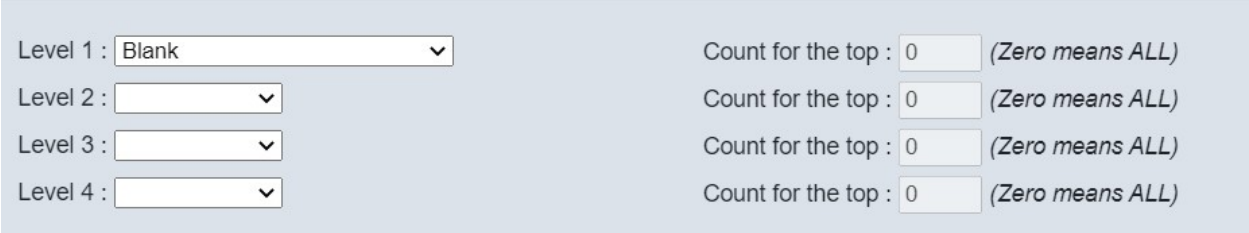
User can also zoom and pan on the chart by using options at the bottom of the chart:

Doughnut Chart

Select the chart from the chart list on the interface:

Open the Configuration panel by clicking on the first tab to the right: 

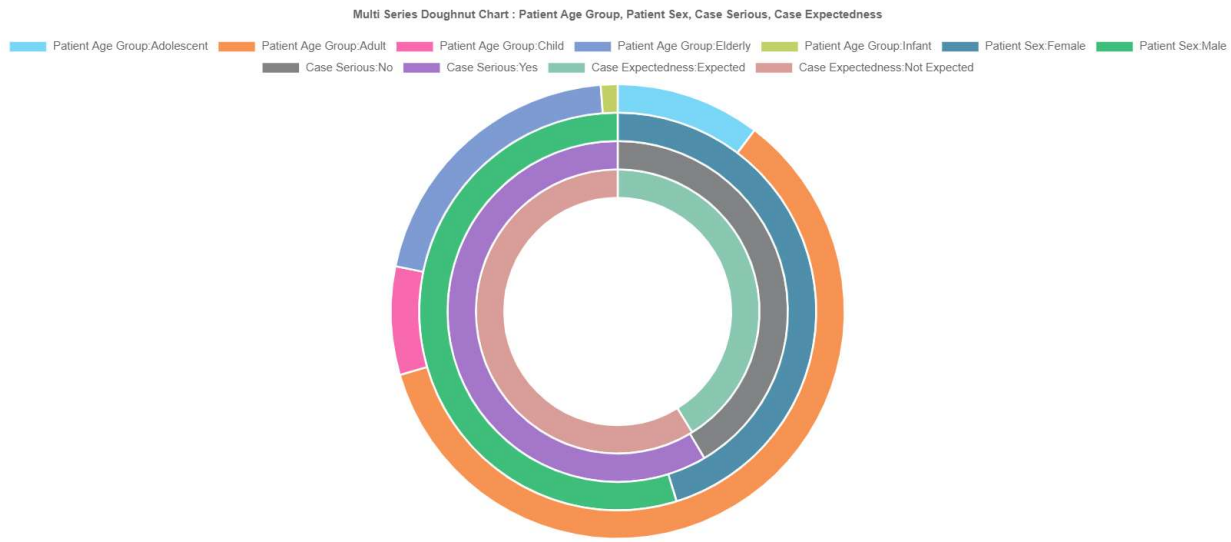
For filtering data, see section “Filtering Data”



The user can select up to 4 dimensions to plot and can pick top “N” for all of these dimensions

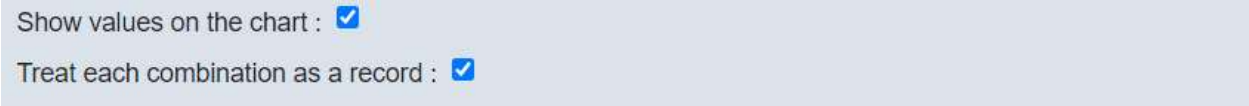
Picking Top “N”

For any dimension, you can focus on the top “N” of data.
For example, you have a list of countries where applications have come from. This can be a very large list, while you are only interested I the top 2 countries.
You can set the “Count for the top” to “2”.
You will see only three segmentations in the chart: Two for the top 2 values and one labelled “Others”. This will be the sum of applications from all values that are not part of the top two.



Doughnut chart with four dimensions plotted.

Other options



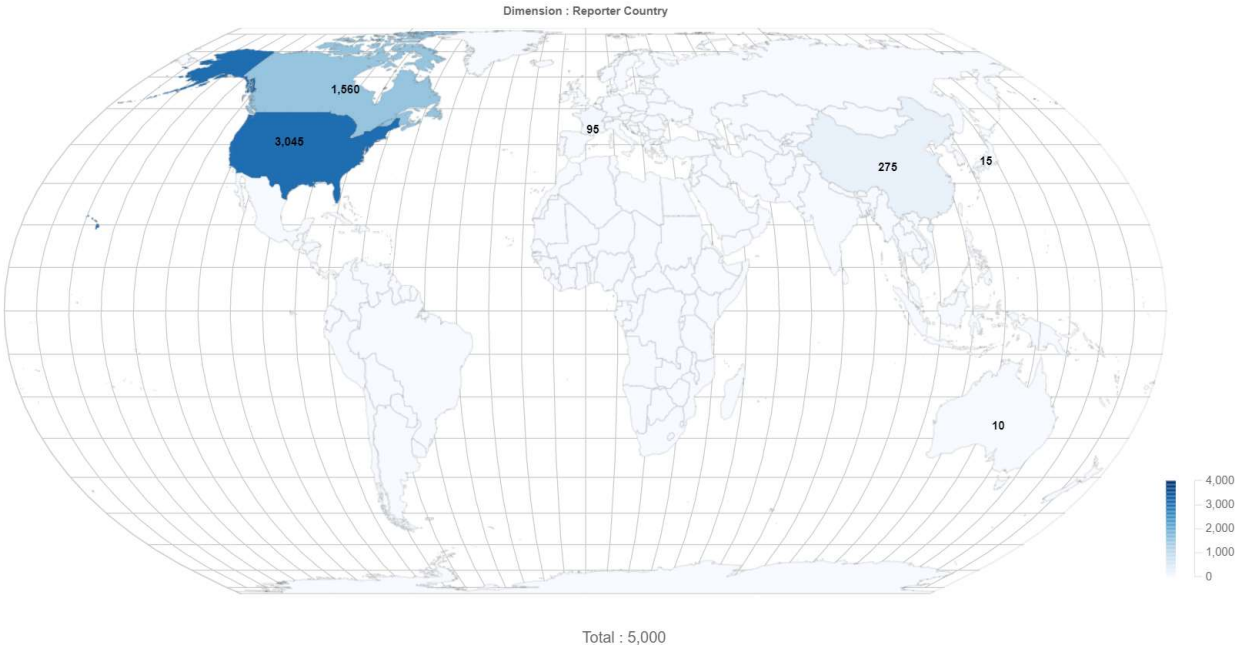
“Show values on the chart” show the numbers on the chart

See section “Data with multiple concurrent values” for the option “Treat each combination as a record”

Geo Map

Select the chart from the chart list on the interface:

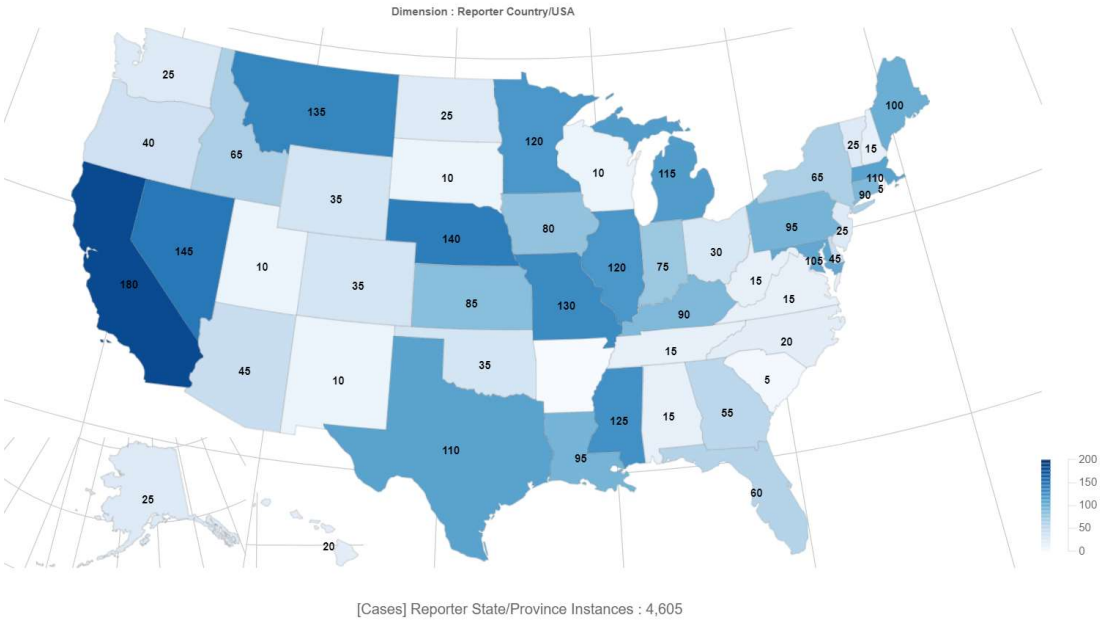
The Geo Map shows data against countries (and US States / Canadian Provinces, if applicable)



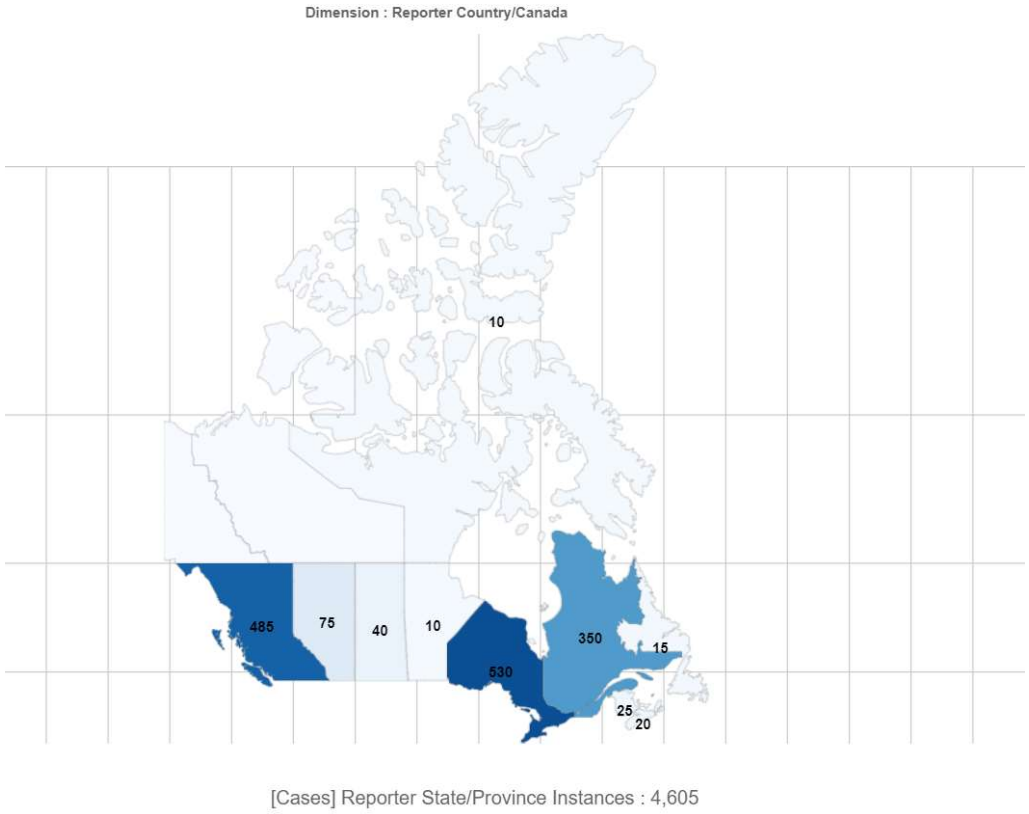
Geo Map

A tooltip shows the country name when you drag the mouse over the country.

If the US or Canada can be drilled further to States or Provinces, the map will turn yellow when you drag the mouse over it.



Drill down to U.S. states

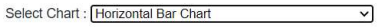


Drill down to Canadian provinces

In the case of states and provinces, when you drag the mouse over a state or province, the name appears in a tooltip.

Horizontal Bar Chart

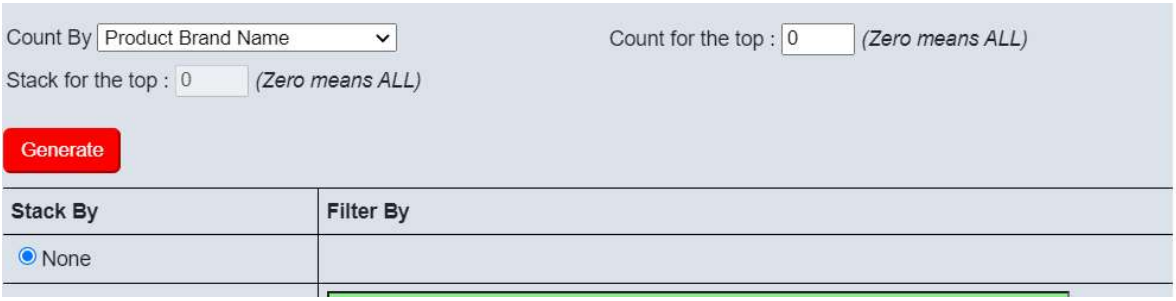
Select the chart from the chart list on the interface:



Open the Configuration panel by clicking on the first tab to the right: 

For filtering data, see section “Filtering Data”

You can select the dimensions to plot.



Picking Top “N”

For any dimension, you can focus on the top “N” of data.

For example, you have a list of countries where applications have come from. This can be a very large list, while you are only interested I the top 2 countries.

You can set the “Count for the top” to “2”.

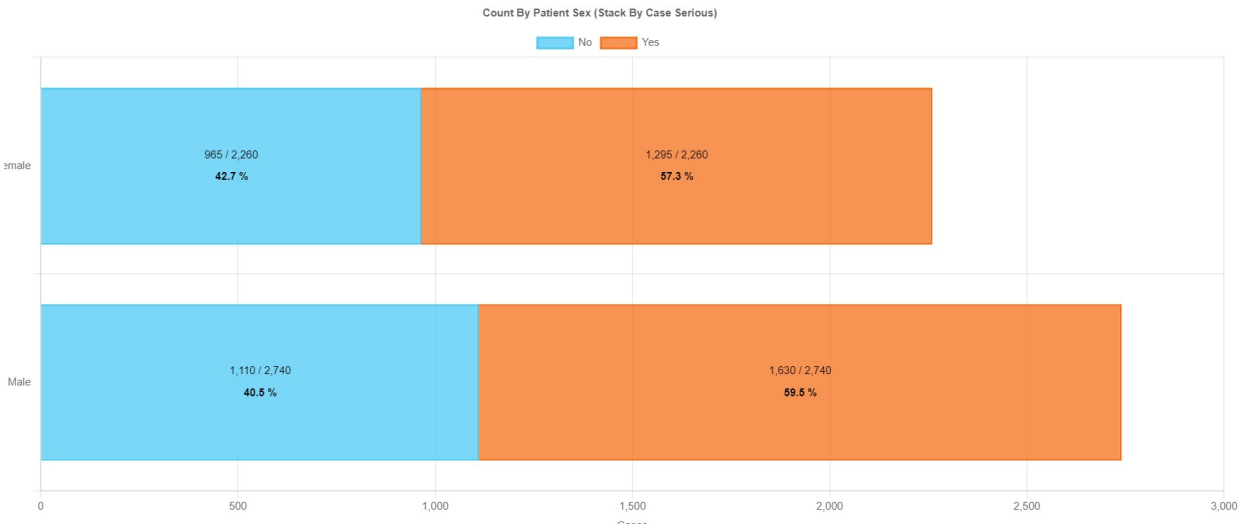
You will see only three segmentations in the chart: Two for the top 2 values and one labelled “Others”. This will be the sum of applications from all values that are not part of the top two.

Stacking

This chart also lets the user stack another dimension when generating the chart.

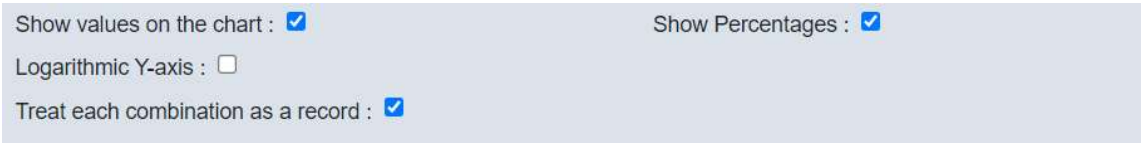
For example, the user is plotting data by age groups (children, adolescents, adults, seniors). The chart will show 4 segments. However, if the user stacks by gender, each of the 4 segments will be further divided by gender (male, female, unknow).

When stacking, it is also possible to focus on the top “N” of data. So that when subsegments show, they are distinct only for the first “N” chosen, summing up the rest as “Others”



Horizontal Bar Chart, by Patient Sex, stacked by Case Seriousness

Other options



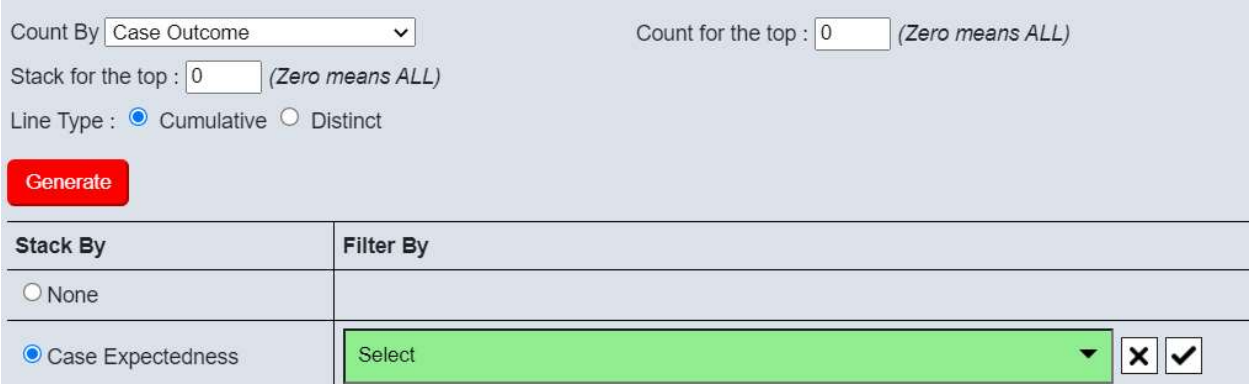
"Show values on the chart" show the numbers on the chart
"Show Percentages" shows the breakdown, by percentage.
The user can also switch the Y axis from linear to logarithmic by selecting "Logarithmic Y-axis"
See section "Data with multiple concurrent values" for the option "Treat each combination as a record"

User can also zoom and pan on the chart by using options at the bottom of the chart:

Line Chart

Select the chart from the chart list on the interface:

Open the Configuration panel by clicking on the first tab to the right: 
For filtering data, see section "Filtering Data"



Picking Top "N"

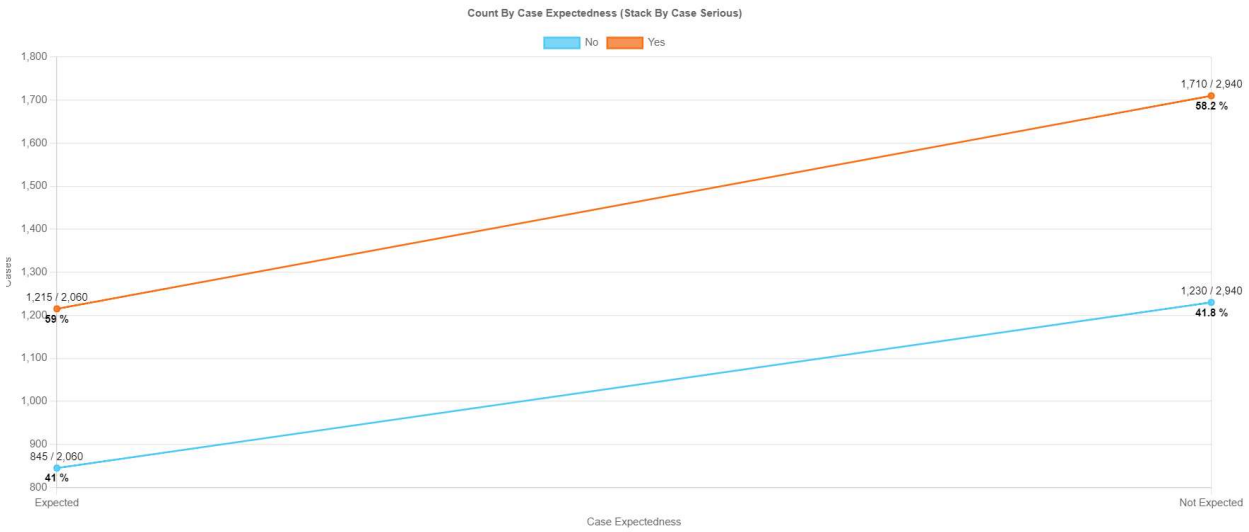
For any dimension, you can focus on the top "N" of data.
For example, you have a list of countries where applications have come from. This can be a very large list, while you are only interested I the top 2 countries.
You can set the "Count for the top" to "2".
You will see only three segmentations in the chart: Two for the top 2 values and one labelled "Others". This will be the sum of applications from all values that are not part of the top two.

Stacking

This chart also lets the user stack another dimension when generating the chart.
For example, the user is plotting data by age groups (children, adolescents, adults, seniors). The chart will show 4 segments. However, if the user stacks by gender, each of the 4 segments will be further divided by gender (male, female, unknow).

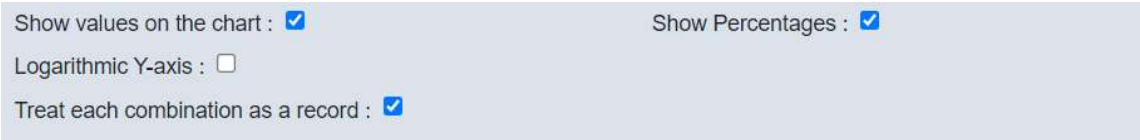
When stacking, it is also possible to focus on the top "N" of data. So that when subsegments show, they are distinct only for the first "N" chosen, summing up the rest as "Others"

For Line Chart, when the user stacks, they are given an option to select either "Cumulative" or "Distinct: lines.
Cumulative: Each line is on top of the line below it. It starts counting from the point of the prior line (line below it), thereby sowing the total value on the topmost line.
Distinct: Each line counts from the base (zero line)



Line Chart, counted by Case Expectedness, stacked by Case Serious, with distinct lines

Other options

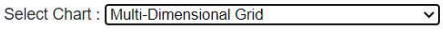


"Show values on the chart" show the numbers on the chart
"Show Percentages" shows the breakdown, by percentage.
The user can also switch the Y axis from linear to logarithmic by selecting "Logarithmic Y-axis"
See section "Data with multiple concurrent values" for the option "Treat each combination as a record"

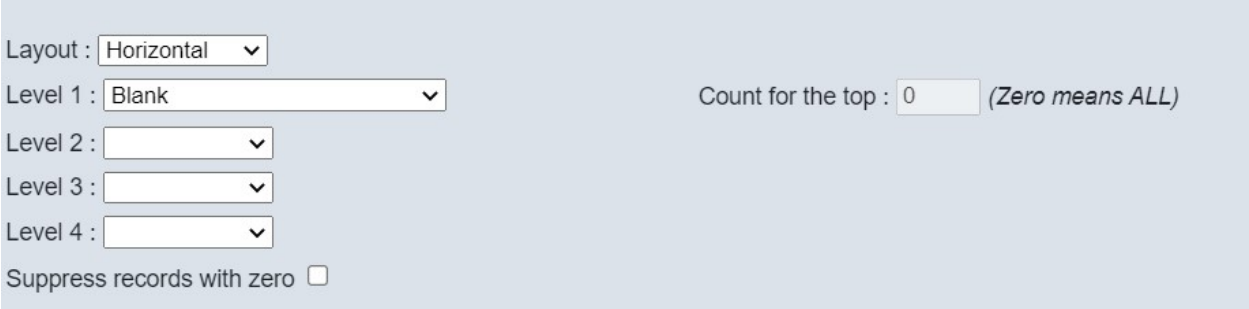
User can also zoom and pan on the chart by using options at the bottom of the chart:

Multi-Dimensional Grid

Select the chart from the chart list on the interface



Open the Configuration panel by clicking on the first tab to the right: 
For filtering data, see section "Filtering Data"



A grid can have up to four level. It shows the total amount that pertain to categories listed in the grid..

The layout can be plotted horizontally or vertically.
The user can hide rows (for vertical layout) or columns (for horizontal layout) by checking “Suppress records with zero”

Picking Top “N”
For any dimension, you can focus on the top “N” of data.
For example, you have a list of countries where applications have come from. This can be a very large list, while you are only interested I the top 2 countries.
You can set the “Count for the top” to “2”.
You will see only three segmentations in the chart: Two for the top 2 values and one labelled “Others”. This will be the sum of applications from all values that are not part of the top two.

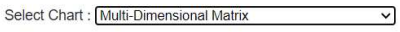
Fatal				Not recovered/not resolved				Recovered/resolved				Recovering/resolving				Case Outcome
65				2,860				1,560				515				5,000
No		Yes		No		Yes		No		Yes		No		Yes		Case Serious
30		35		1,190		1,670		650		910		205		310		5,000
Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Patient Sex
10	20	20	15	585	605	725	945	285	365	395	515	85	120	155	155	5,000
Data Type : Cases																
Operation : Sum																

A grid with three level

See section “Data with multiple concurrent values” for the option “Treat each combination as a record”

Multi-Dimensional Matrix

Select the chart from the chart list on the interface



Open the Configuration panel by clicking on the first tab to the right: 
For filtering data, see section “Filtering Data”

A matrix can have up to two vertical level and up to two horizontal. It shows the total amount that pertain to categories listed in the vertical and horizontal axes of the matrix.

Picking Top “N”

For any dimension, you can focus on the top “N” of data.
For example, you have a list of countries where applications have come from. This can be a very large list, while you are only interested I the top 2 countries.
You can set the “Count for the top” to “2”.
You will see only three segmentations in the chart: Two for the top 2 values and one labelled “Others”. This will be the sum of applications from all values that are not part of the top two.

Select Chart : Multi-Dimensional Matrix

		Case Outcome																				
		Fatal					Not recovered/not resolved					Recovered/resolved					Recovering/resolving					
		Patient Age Group					Patient Age Group					Patient Age Group					Patient Age Group					
Patient Sex	Case Serious	Adolescent	Adult	Child	Elderly	Infant	Adolescent	Adult	Child	Elderly	Infant	Adolescent	Adult	Child	Elderly	Infant	Adolescent	Adult	Child	Elderly	Infant	Totals
Female	No	5	5	0	0	0	40	340	35	160	10	25	195	10	55	0	5	65	0	15	0	965
	Yes	0	10	0	5	5	90	410	45	170	10	60	220	35	75	5	35	95	15	10	0	1,295
Male	No	0	15	5	0	0	45	375	40	135	10	25	210	35	95	0	20	70	0	25	5	1,110
	Yes	5	10	0	0	0	75	600	75	195	0	60	275	75	90	15	25	115	15	0	0	1,630
Totals		10	40	5	5	5	250	1,725	195	660	30	170	900	155	315	20	85	345	30	50	5	5,000

Data Type : Cases

Operation : Sum

A matrix with two horizontal and two vertical dimensions

The lock icon on the upper left freeze the dimension columns on the left, if the matrix requires horizontal scrolling.

See section “Data with multiple concurrent values” for the option “Treat each combination as a record”

Pie chart

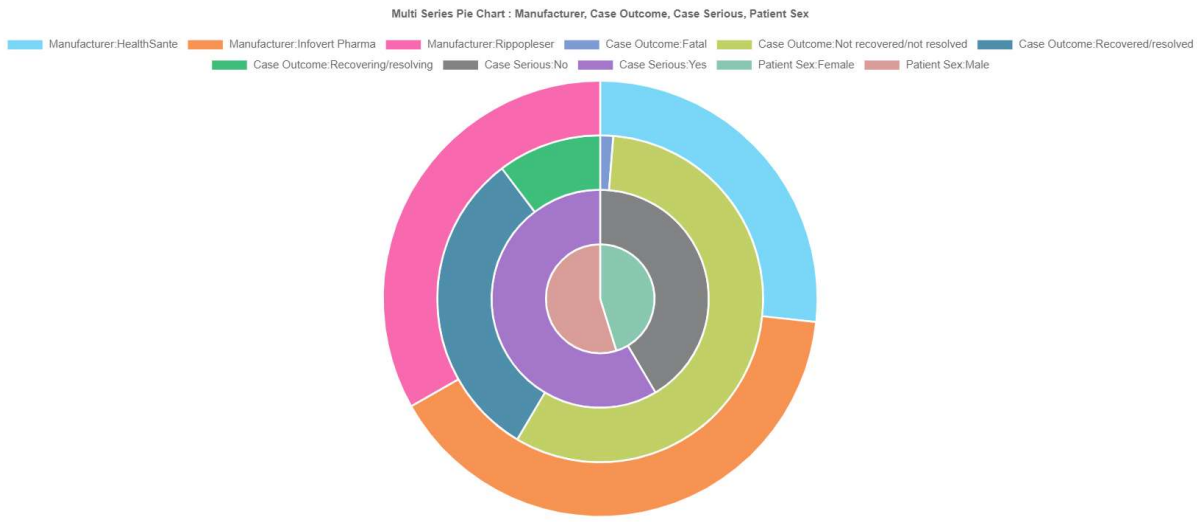
Select the chart from the chart list on the interface

Open the Configuration panel by clicking on the first tab to the right: 
For filtering data, see section “Filtering Data”

The user can select up to 4 dimensions to plot and can pick top “N” for all of these dimensions

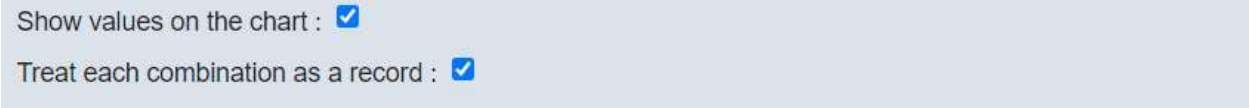
Picking Top “N”

For any dimension, you can focus on the top “N” of data.
For example, you have a list of countries where applications have come from. This can be a very large list, while you are only interested I the top 2 countries.
You can set the “Count for the top” to “2”.
You will see only three segmentations in the chart: Two for the top 2 values and one labelled “Others”. This will be the sum of applications from all values that are not part of the top two.



Pie chart with 4 dimensions

Other options



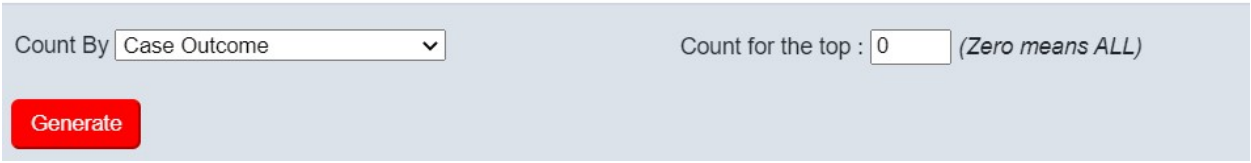
"Show values on the chart" show the numbers on the chart
See section "Data with multiple concurrent values" for the option "Treat each combination as a record"

Polar Chart

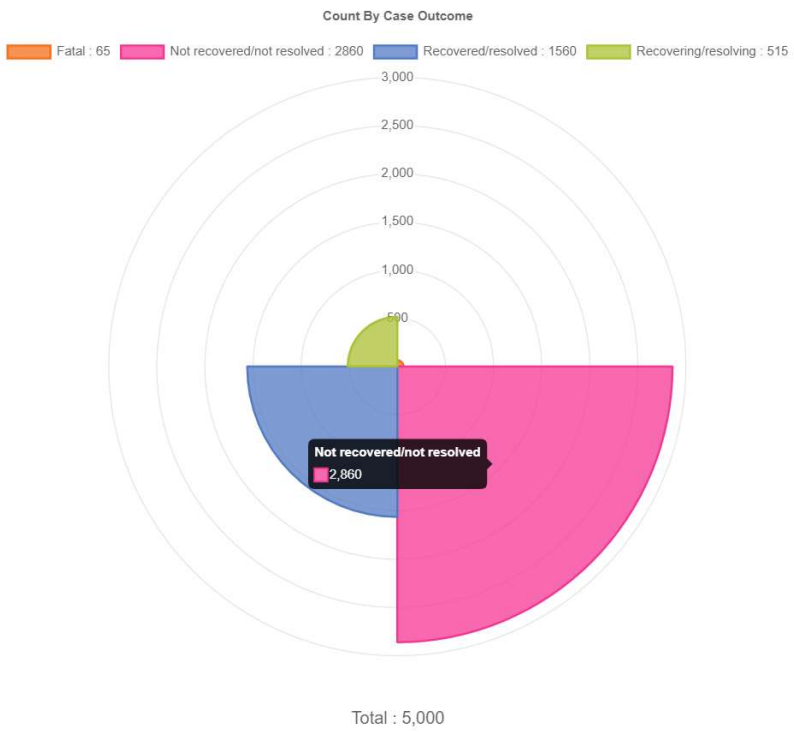
Select the chart from the chart list on the interface:

The polar chart is like the pie chart, but the data size is represented by the radius of the wedge, and not the angle.

Open the Configuration panel by clicking on the first tab to the right: 
For filtering data, see section "Filtering Data"



<u>Picking Top "N"</u>
For any dimension, you can focus on the top "N" of data.
For example, you have a list of countries where applications have come from. This can be a very large list, while you are only interested I the top 2 countries.
You can set the "Count for the top" to "2".
You will see only three segmentations in the chart: Two for the top 2 values and one labelled "Others". This will be the sum of applications from all values that are not part of the top two.*



Polar Chart, by Case Outcome

Other options

"Show values on the chart" show the numbers on the chart
See section "Data with multiple concurrent values" for the option "Treat each combination as a record"

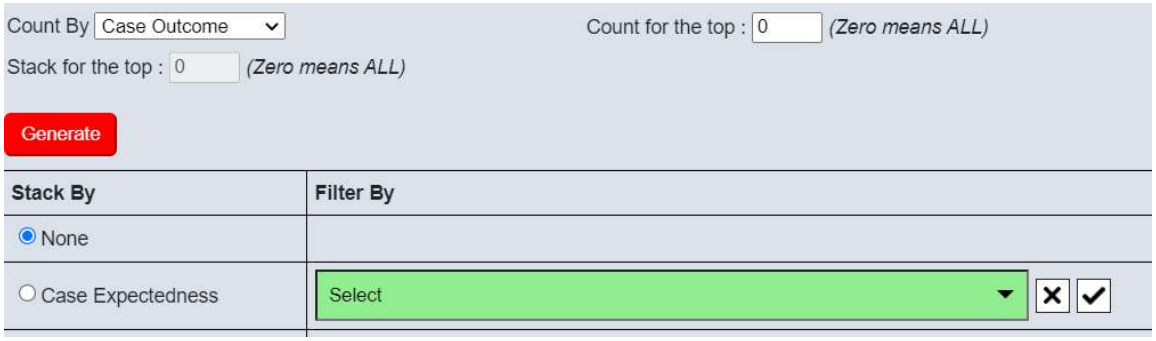
Radar Chart

Select the chart from the chart list on the interface:

The Admin decides which dimensions to allow for Radar charts. Typically, only dimensions that have more than two values should be plotted on the Radar chart.

Open the Configuration panel by clicking on the first tab to the right: 
For filtering data, see section "Filtering Data"

You can select the dimensions to plot.



Picking Top "N"

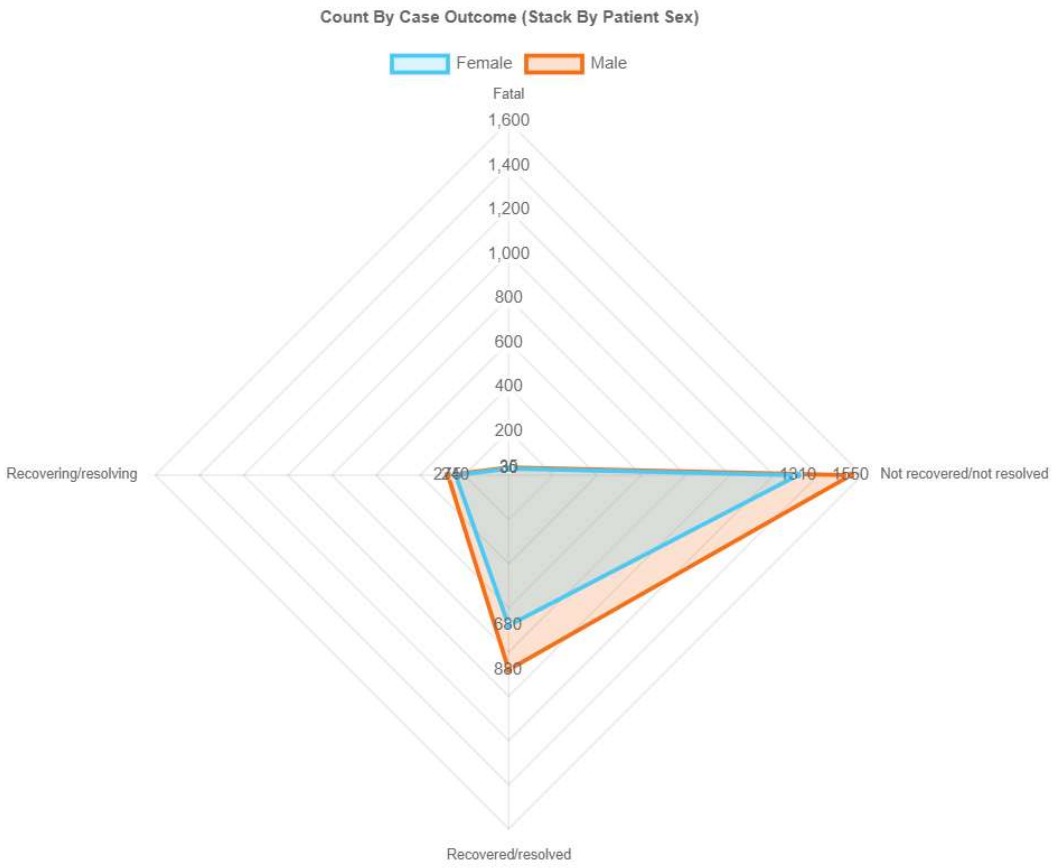
For any dimension, you can focus on the top "N" of data.
For example, you have a list of countries where applications have come from. This can be a very large list, while you are only interested I the top 2 countries.
You can set the "Count for the top" to "2".
You will see only three segmentations in the chart: Two for the top 2 values and one labelled "Others". This will be the sum of applications from all values that are not part of the top two.

Stacking

This chart also lets the user stack another dimension when generating the chart.
For example, the user is plotting data by age groups (children, adolescents, adults, seniors). The chart will show 4 segments. However, if the user stacks by gender, each of the 4 segments will be further divided by gender (male, female, unknow).

When stacking, it is also possible to focus on the top "N" of data. So that when subsegments show, they are distinct only for the first "N" chosen, summing up the rest as "Others"

Radar chart



Radar Chart, by Case Outcome, stacked by Patient Sex

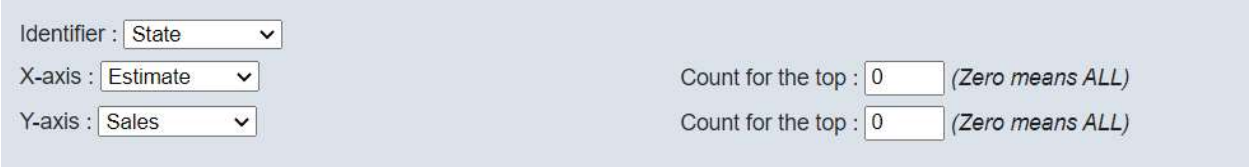
See section “Data with multiple concurrent values” for the option “Treat each combination as a record”

Scatter Chart

Select the chart from the chart list on the interface:

A scatter chart needs at least two facts (data that is measured). One of the measures is plotted on the X axis, and the other on the Y axis.

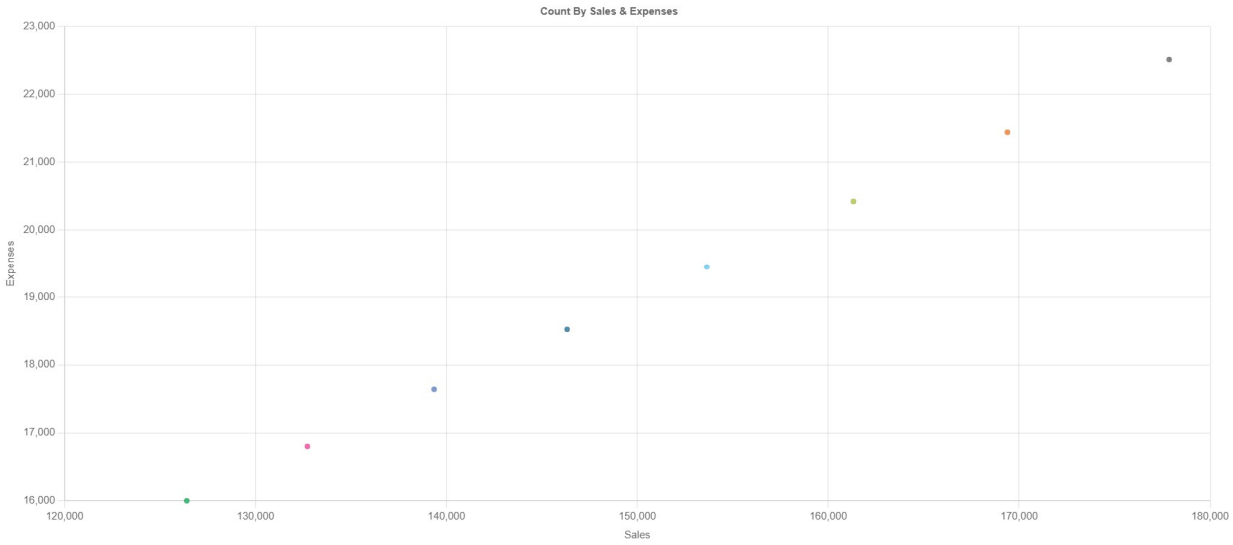
Open the Configuration panel by clicking on the first tab to the right: 
For filtering data, see section “Filtering Data”
You can select the dimensions to plot.



"Identifier" is the dimension the numbers will be picked from.

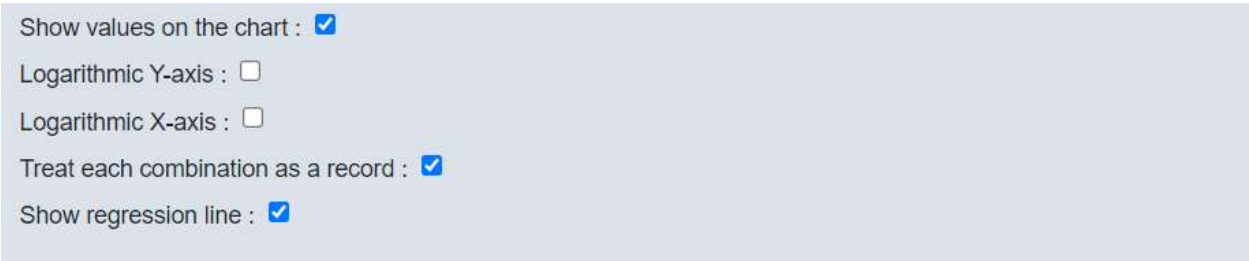
Picking Top "N"

For any dimension, you can focus on the top "N" of data.
For example, you have a list of countries where applications have come from. This can be a very large list, while you are only interested I the top 2 countries.
You can set the "Count for the top" to "2".
You will see only three segmentations in the chart: Two for the top 2 values and one labelled "Others". This will be the sum of applications from all values that are not part of the top two.



Scatter Chart

Other options



"Show values on the chart" show the numbers on the chart
The user can also switch the X-axis and the Y axis from linear to logarithmic by selecting "Logarithmic X-axis" and "Logarithmic Y-axis"

See section “Data with multiple concurrent values” for the option “Treat each combination as a record”
To plot a regression line, select “Show regression line”

User can also zoom and pan on the chart by using options at the bottom of the chart:

Tree Chart

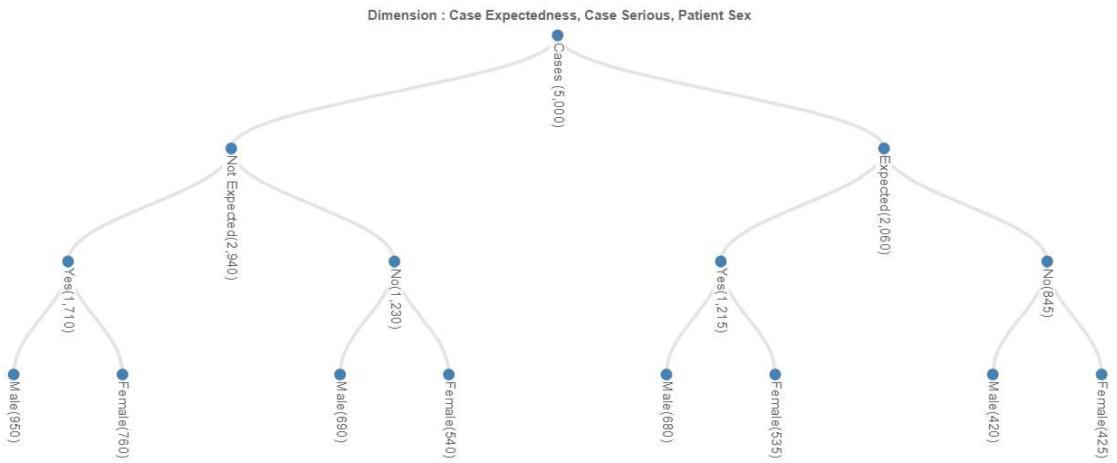
Select the chart from the chart list on the interface:

Open the Configuration panel by clicking on the first tab to the right: 
For filtering data, see section “Filtering Data”

The user can plot tree chart in horizontal or vertical orientation.
If the tree gets crowded, the user can also hide branches with zero count (select “Suppress records with zero”)
This chart can plot a tree with up to 4 levels.

See section “Data with multiple concurrent values” for the option “Treat each combination as a record”

Picking Top “N”
For any dimension, you can focus on the top “N” of data.
For example, you have a list of countries where applications have come from. This can be a very large list, while you are only interested I the top 2 countries.
You can set the “Count for the top” to “2”.
You will see only three segmentations in the chart: Two for the top 2 values and one labelled “Others”. This will be the sum of applications from all values that are not part of the top two.



Tree chart with three levels

See section “Data with multiple concurrent values” for the option “Treat each combination as a record”

User can also zoom on the chart:

Reset Zoom

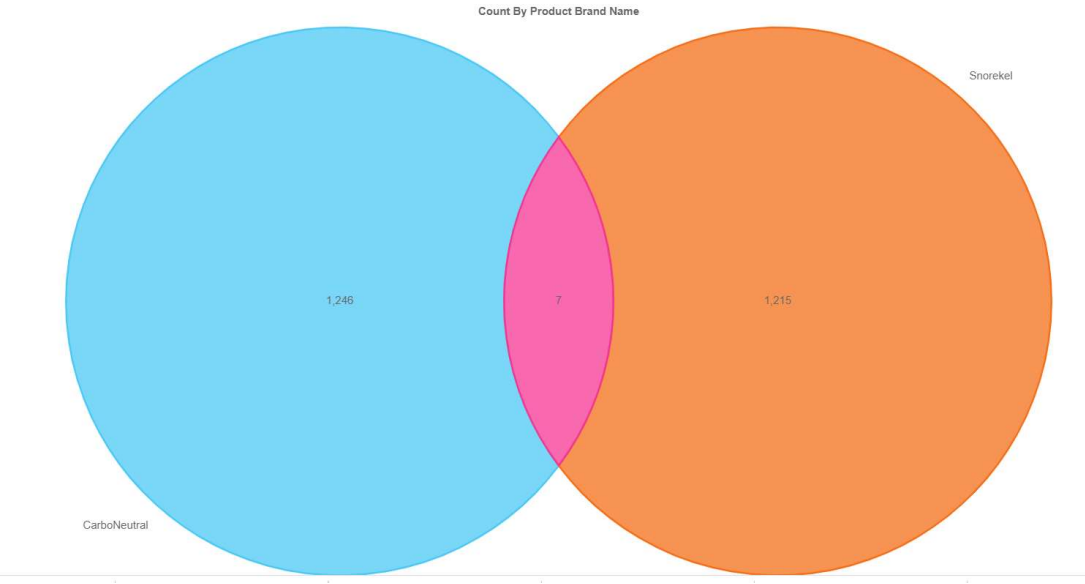
Venn Diagram

Select the chart from the chart list on the interface:

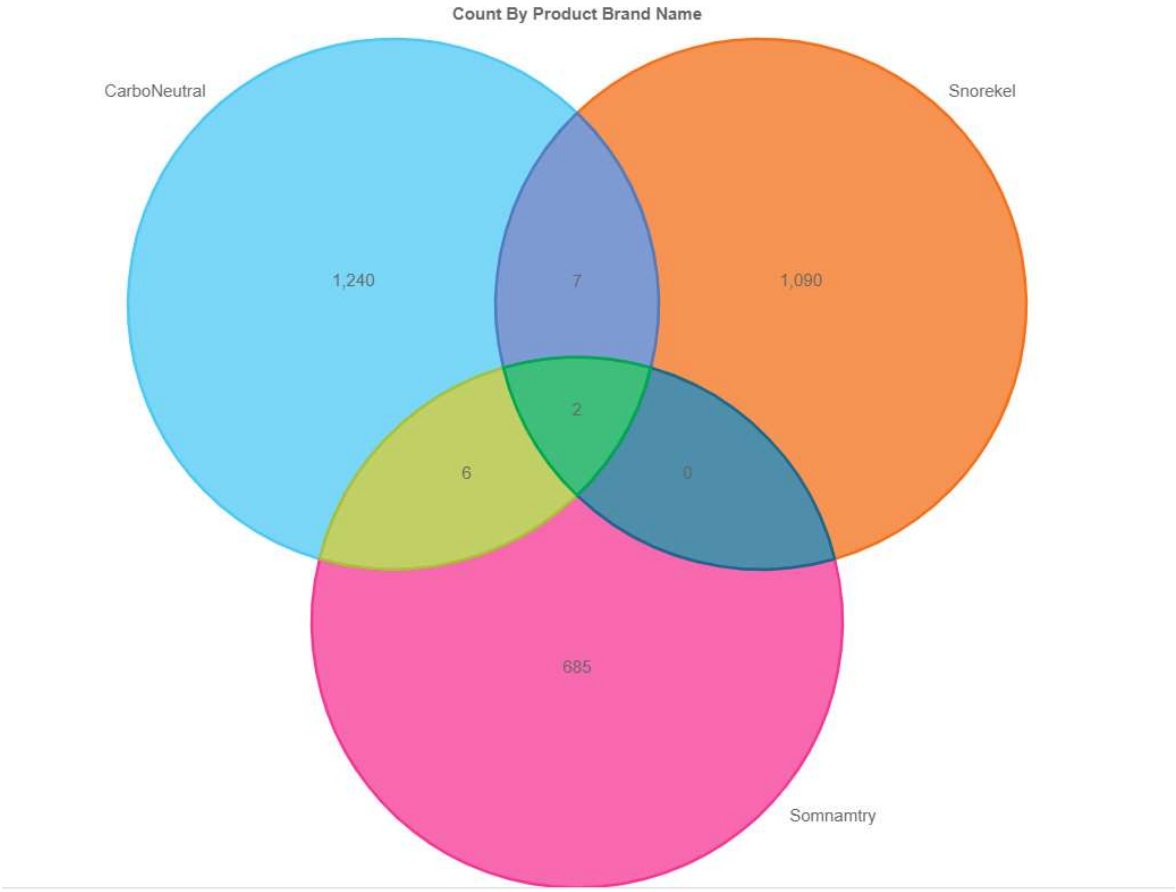
Select Chart : Venn Diagram

Open the Configuration panel by clicking on the first tab to the right: 
For filtering data, see section “Filtering Data”

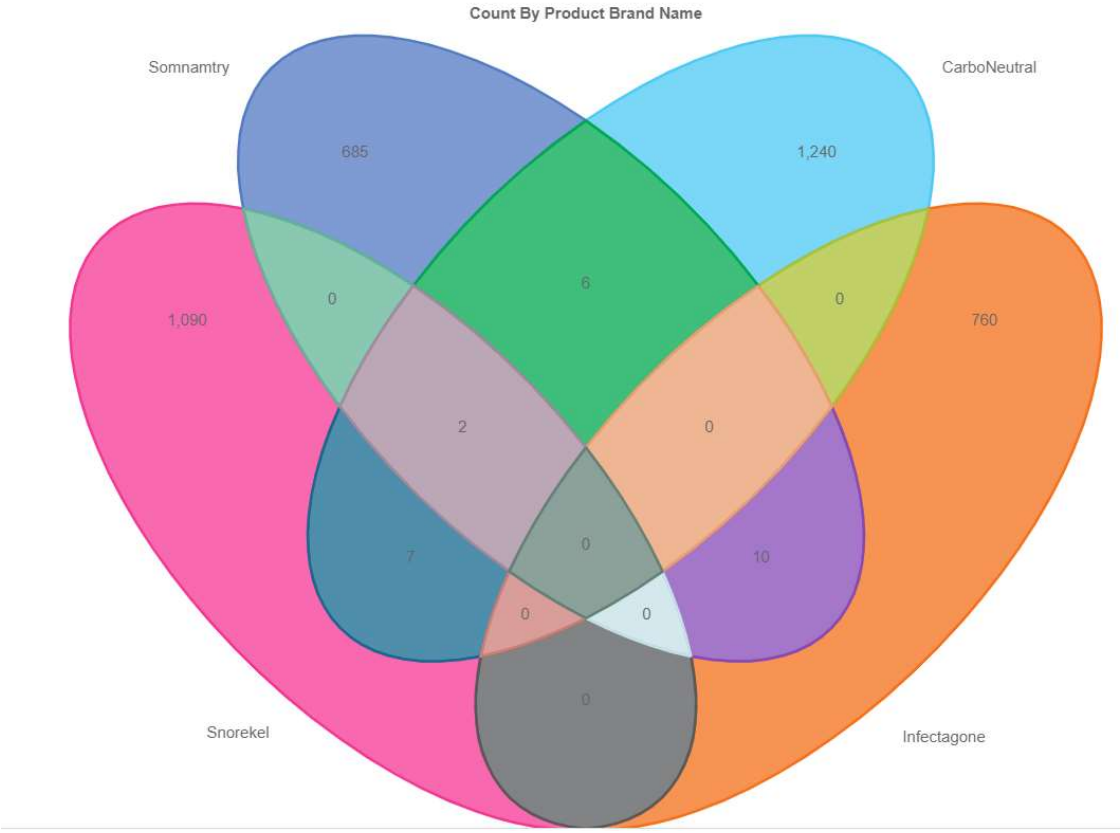
Venn Diagrams show what is common between different data. To use Venn Diagrams, the data should have more than one instance of what is being measured.
For example, when reporting on drugs and any adverse reaction suffered by a patient, the patient may have used more than one drug and/or the patient may have experienced one or more adverse reaction.
In the above case, a Venn Diagram would show how many cases have 2 given products in common, or 2 given adverse reactions.
Venn Diagrams can show anywhere form the top 2 to top 4 items that have the most occurrence, and shows any intersection of data between them.



Venn Diagram showing the top 2 brand names



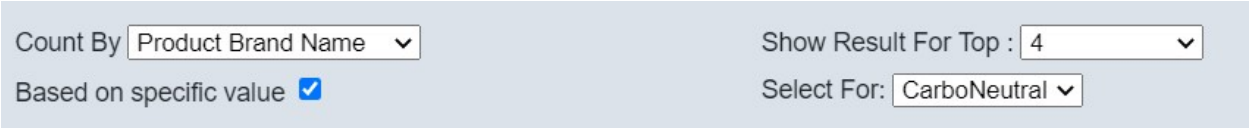
Venn Diagram showing the top 3 brand names



Venn Diagram showing the top 4 brand names

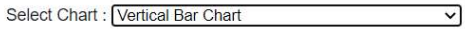
Venn Diagram also allows the user to select a specific dimension value (in this case, a specific brand name) and discover which products have the most intersection point with the selected brand name.

To select a specific value, user should click on the checkbox for “Based on specific value” and then select an item (a brand, in the above example).

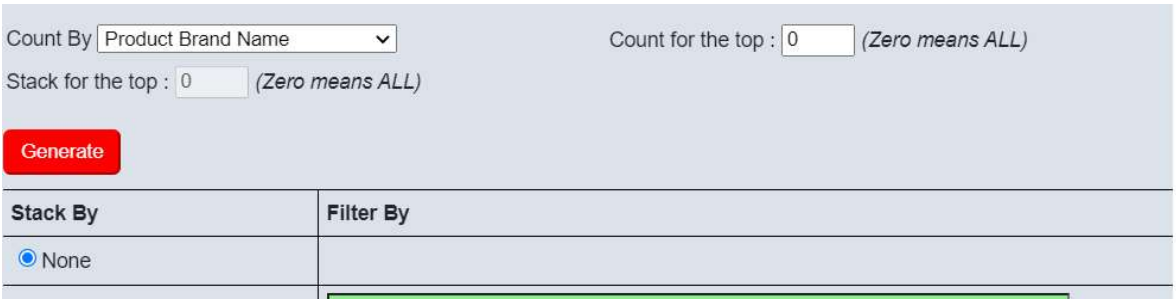


Vertical Bar Chart

Select the chart from the chart list on the interface:



Open the Configuration panel by clicking on the first tab to the right: 
For filtering data, see section “Filtering Data”
You can select the dimensions to plot.



Picking Top "N"

For any dimension, you can focus on the top "N" of data.

For example, you have a list of countries where applications have come from. This can be a very large list, while you are only interested I the top 2 countries.

You can set the "Count for the top" to "2".

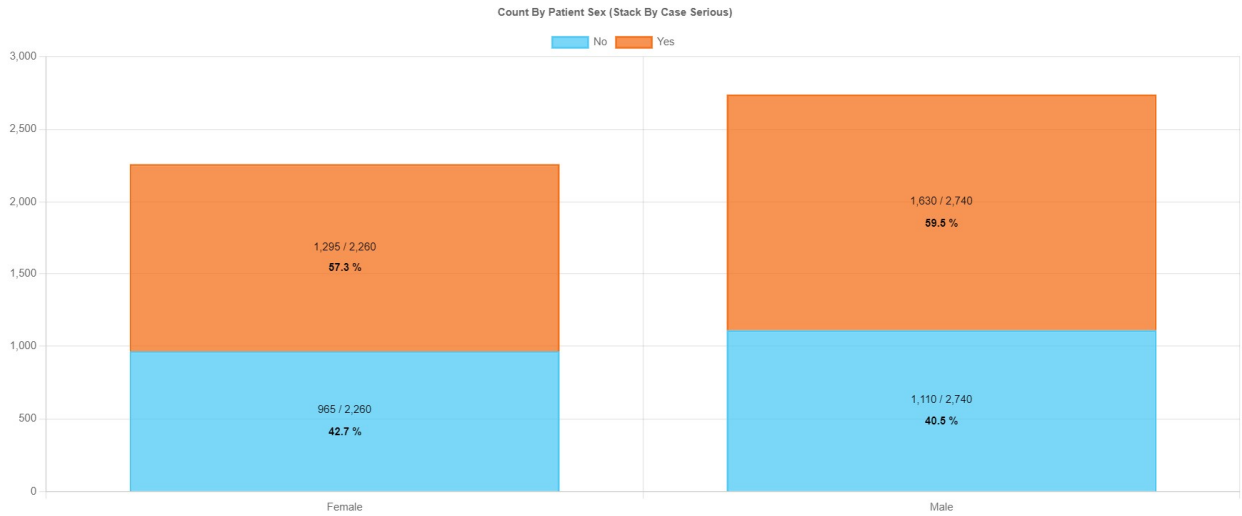
You will see only three segmentations in the chart: Two for the top 2 values and one labelled "Others". This will be the sum of applications from all values that are not part of the top two.

Stacking

This chart also lets the user stack another dimension when generating the chart.

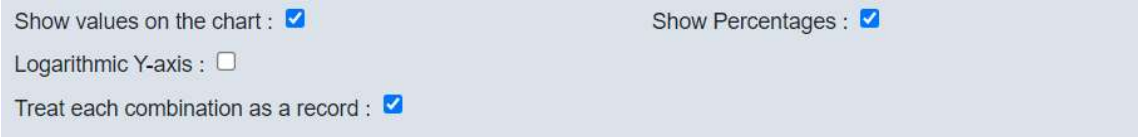
For example, the user is plotting data by age groups (children, adolescents, adults, seniors). The chart will show 4 segments. However, if the user stacks by gender, each of the 4 segments will be further divided by gender (male, female, unknow).

When stacking, it is also possible to focus on the top "N" of data. So that when subsegments show, they are distinct only for the first "N" chosen, summing up the rest as "Others"



Vertical Bar Chart, by Patient Sex, stacked by Case Seriousness

Other options

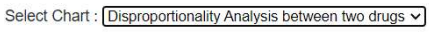


"Show values on the chart" show the numbers on the chart
"Show Percentages" shows the breakdown, by percentage.
The user can also switch the Y axis from linear to logarithmic by selecting "Logarithmic Y-axis"
See section "Data with multiple concurrent values" for the option "Treat each combination as a record"

User can also zoom and pan on the chart by using options at the bottom of the chart:

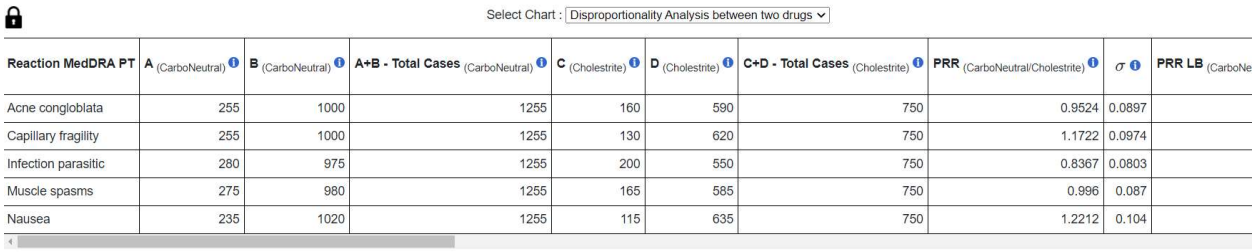
Disproportionate Analysis between two drugs (Torocube PV only)

Select the chart from the chart list on the interface:



Open the Configuration panel by clicking on the first tab to the right: 
For filtering data, please see section "Filtering Data"
For thresholds, please see section "Thresholds"

User can select between 2 Products (Brand or generic names, or active ingredients), as well as a MedDRA category (from SOC, HLGT to LLT) and can view the Chi-Square and p-value to see if the correlation between two products on a given reaction is by chance or statistically significant.

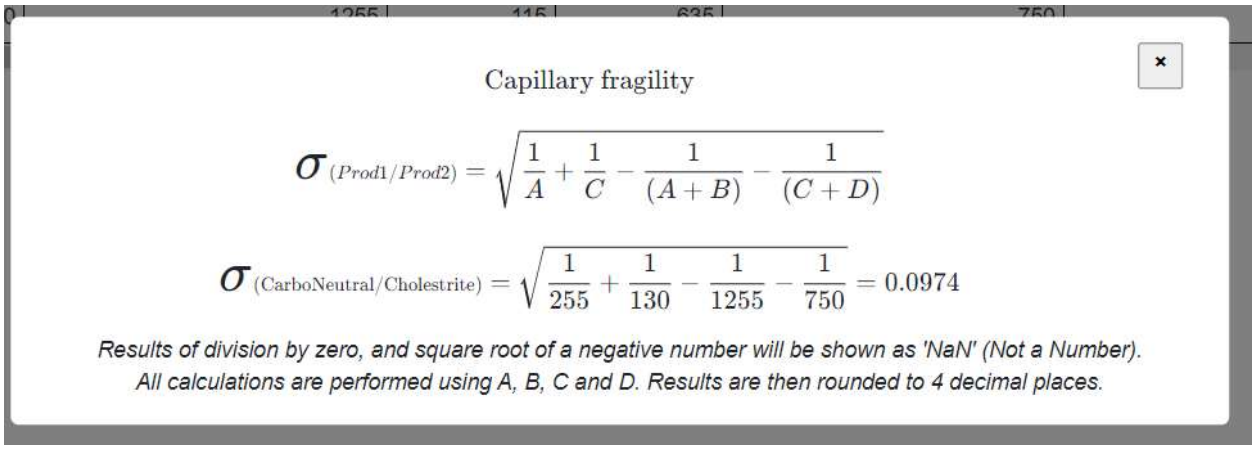


Reaction MedDRA PT	A (CarboNeutral)	B (CarboNeutral)	A+B - Total Cases (CarboNeutral)	C (Cholestrite)	D (Cholestrite)	C+D - Total Cases (Cholestrite)	PRR (CarboNeutral/Cholestrite)	σ	PRR LB (CarboNe
Acne congloblata	255	1000	1255	160	590	750	0.9524	0.0897	
Capillary fragility	255	1000	1255	130	620	750	1.1722	0.0974	
Infection parasitic	280	975	1255	200	550	750	0.8367	0.0803	
Muscle spasms	275	980	1255	165	585	750	0.996	0.087	
Nausea	235	1020	1255	115	635	750	1.2212	0.104	

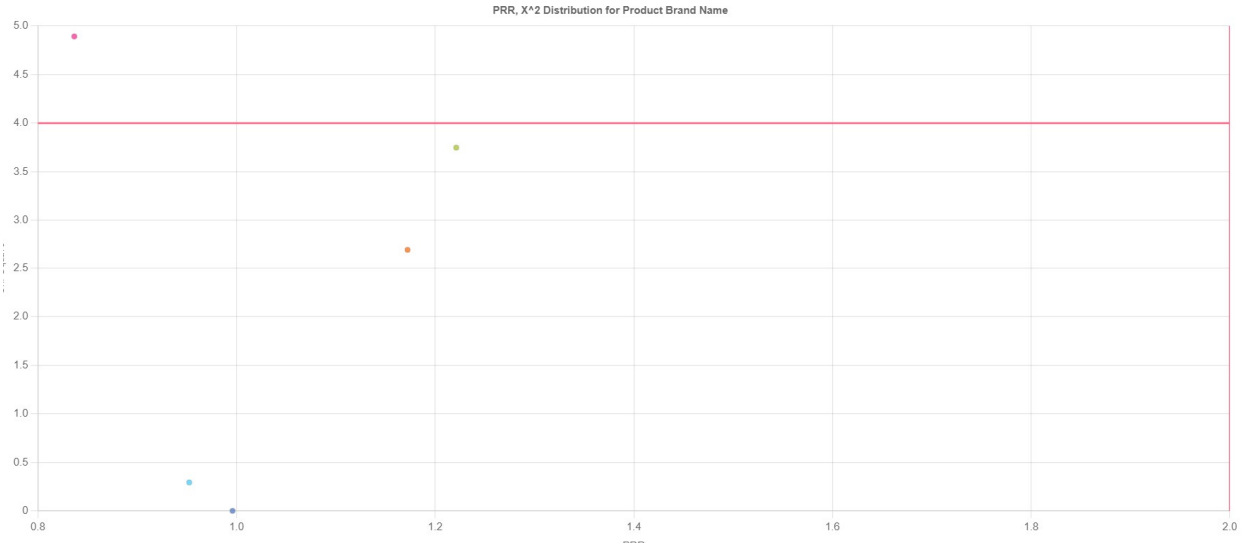
The lock icon in the upper left freezes the first column when the user scrolls columns.

An explanation of what each column means can be viewed in a tooltip that becomes visible when the user mouses over the "i" (information) icon in the grid's header.

User can see how each number was derived by clicking on a cell if its background color turns Orange on mouse over (all cells with calculation will have this feature, cells where records are counted will not).



User can also calculate the Chi Square using the Yate's Correction formula, if they choose.
The report can also be plotted by choosing "Report Type" of "Scatter Chart" in the Configuration panel.



User can also zoom and pan on the chart by using options at the bottom of the chart:

Dynamic PRR Report (Torocube PV only)

Select the chart from the chart list on the interface:

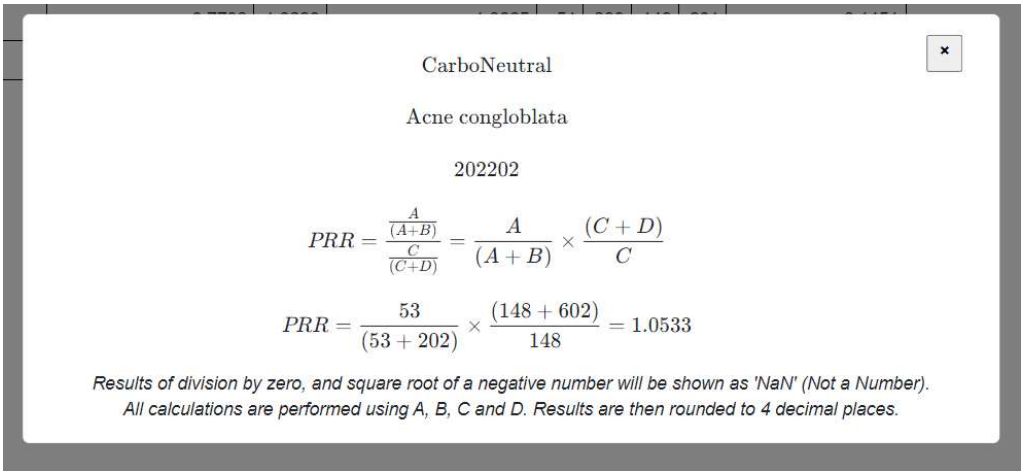
Open the Configuration panel by clicking on the first tab to the right: 
For filtering data, please see section "Filtering Data"

User can select a Product (Brand or generic name, or active ingredient), as well as a single MedDRA item from a category (from SOC, HLGT to LLT) and can view the change to the PRR (Proportional Reporting Ratio) over time.

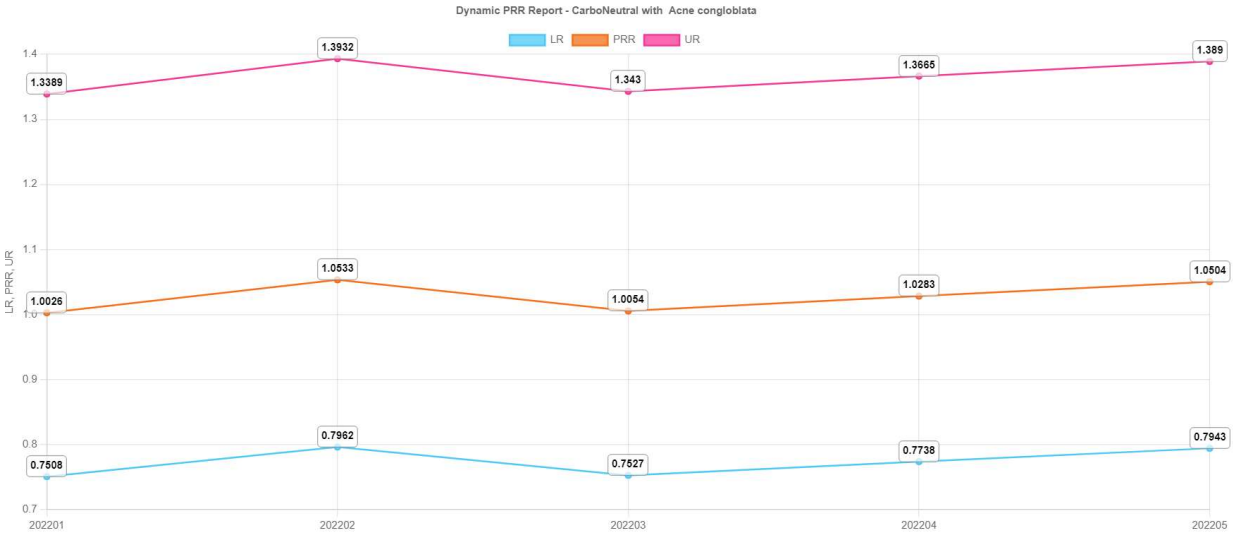
Product Brand Name	Reaction MedDRA PT	Event Month	95 % Confidence LB	PRR	95 % Confidence UB	A	B	C	D	σ
CarboNeutral	Acne congloblata	202201	0.7508	1.0026	1.3389	49	198	148	600	0.1476
CarboNeutral	Acne congloblata	202202	0.7962	1.0533	1.3932	53	202	148	602	0.1427
CarboNeutral	Acne congloblata	202203	0.7527	1.0054	1.343	49	198	147	598	0.1477
CarboNeutral	Acne congloblata	202204	0.7738	1.0283	1.3665	51	200	148	601	0.1451
CarboNeutral	Acne congloblata	202205	0.7943	1.0504	1.389	53	202	149	604	0.1426

An explanation of what each column means can be viewed in a tooltip that becomes visible when the user mouses over the “i” (information) icon in the grid’s header.

User can see how each number was derived by clicking on a cell if its background color turns Orange on mouse over (all cells with calculation will have this feature, cells where records are counted will not).



The PRR can also be plotted by choosing “Report Type” of “Line Chart” in the Configuration panel.



User can also plot the Y-axis as logarithmic by selecting that option in the Configuration panel.

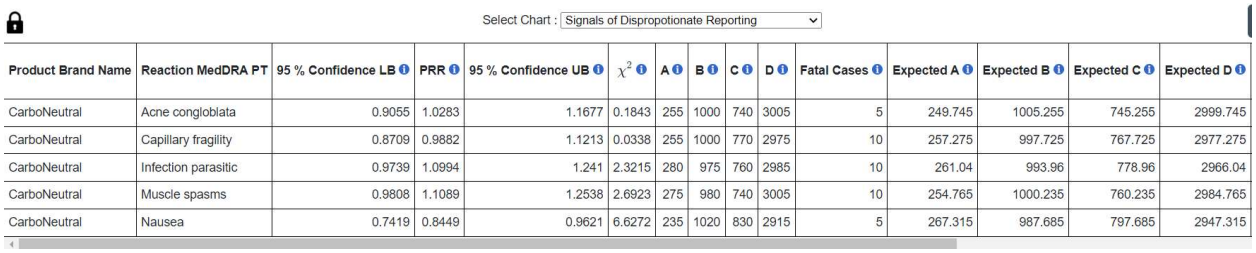
User can also zoom and pan on the chart by using options at the bottom of the chart:

Signals of Disproportionate Reporting (Torocube PV only)

Select the chart from the chart list on the interface:

Open the Configuration panel by clicking on the first tab to the right: 
For filtering data, please see section “Filtering Data”
For thresholds, please see section “Thresholds”

User can select a Product (Brand or generic name, or active ingredient), as well as a MedDRA category (from SOC, HLGT to LLT) and can view the Chi-Square and p-value to see if the correlation between a product and a reaction is by chance or statistically significant.

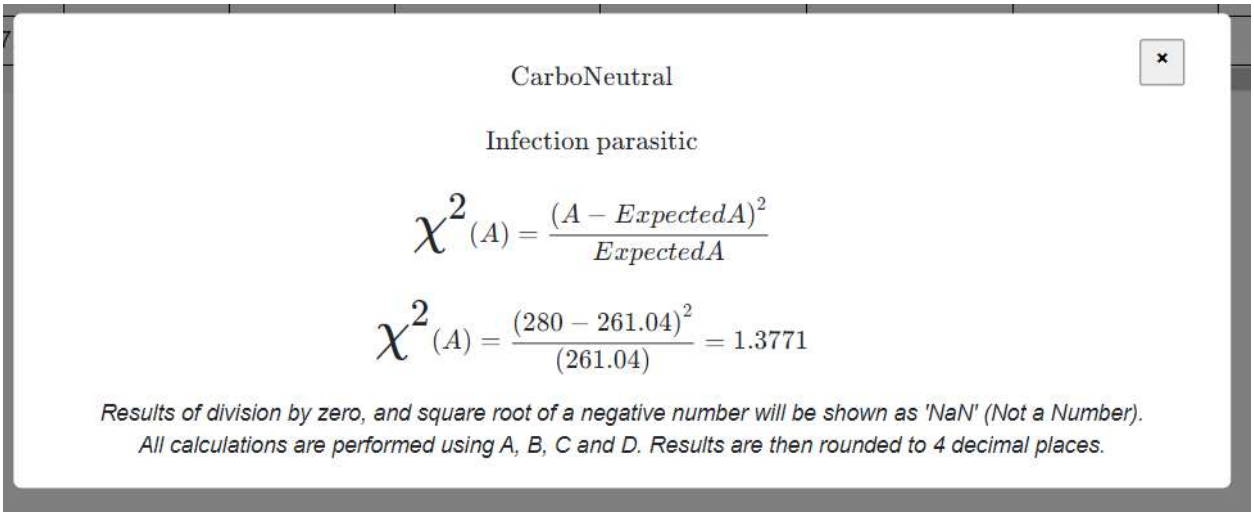


Product Brand Name	Reaction MedDRA PT	95 % Confidence LB	PRR	95 % Confidence UB	χ^2	A	B	C	D	Fatal Cases	Expected A	Expected B	Expected C	Expected D
CarboNeutral	Acne congloblata	0.9055	1.0283	1.1677	0.1843	255	1000	740	3005	5	249.745	1005.255	745.255	2999.745
CarboNeutral	Capillary fragility	0.8709	0.9882	1.1213	0.0338	255	1000	770	2975	10	257.275	997.725	767.725	2977.275
CarboNeutral	Infection parasitic	0.9739	1.0994	1.241	2.3215	280	975	760	2985	10	261.04	993.96	778.96	2966.04
CarboNeutral	Muscle spasms	0.9808	1.1089	1.2538	2.6923	275	980	740	3005	10	254.765	1000.235	760.235	2984.765
CarboNeutral	Nausea	0.7419	0.8449	0.9621	6.6272	235	1020	830	2915	5	267.315	987.685	797.685	2947.315

The lock icon in the upper left freezes the first two columns when the user scrolls columns.

An explanation of what each column means can be viewed in a tooltip that becomes visible when the user mouses over the “i” (information) icon in the grid’s header.

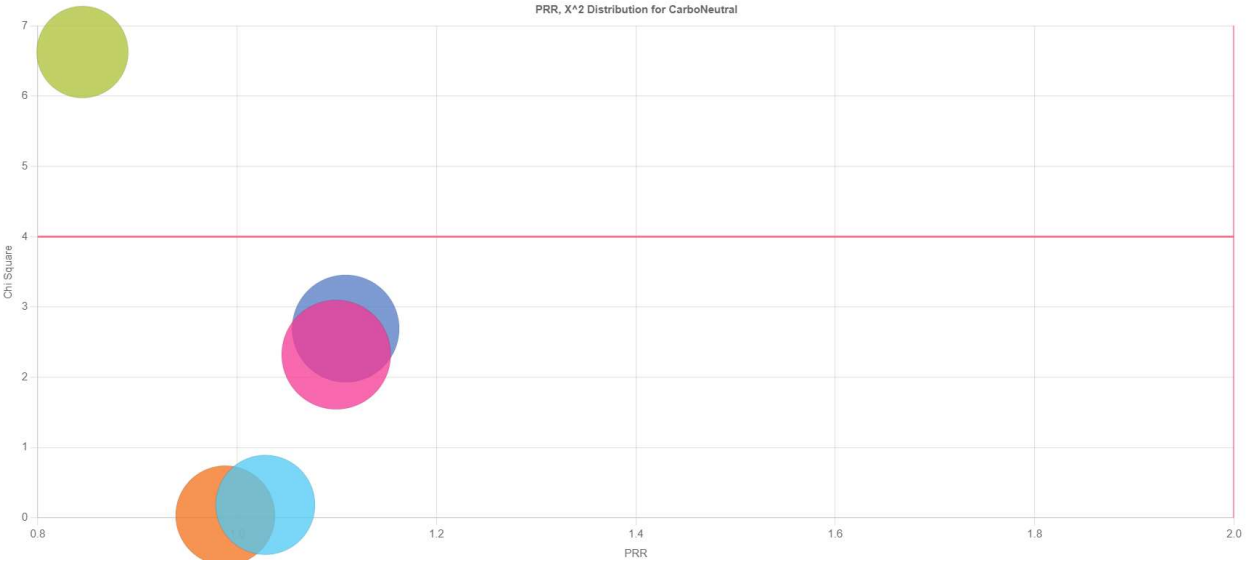
User can see how each number was derived by clicking on a cell if its background color turns Orange on mouse over (all cells with calculation will have this feature, cells where records are counted will not).



There is also a section for Thresholds in the Configuration panel. Please see the section on “Thresholds” for details.

User can also calculate the Chi Square using the Yate’s Correction formula, if they choose.

The report can also be plotted by choosing “Report Type” of “Bubble Chart” in the Configuration panel.



User can also plot the Y-axis and X-axis as logarithmic by selecting that option in the Configuration panel.

User can also zoom and pan on the chart by using options at the bottom of the chart:

Filtering

Filtering works the same way for every chart.

Filters are accessible in the Configuration panel, which is accessed by clicking on the first tab on the right of the screen: 

Mutually exclusive dimensions

Some dimension names may be listed in a dropdown. This allows you to select another dimension form the dropdown.
There dimensions that appear in the same dropdown are considered “Mutually Exclusive”. That is, the user can filter on only one of these dimension at a time.

The screenshot above shows that the dimension “Event Date” is mutually exclusive with other dimensions (which happens to be “FDA Notification Date”.

Hence, the user can only filter using one of these dates, but not both.

Filtering text

User can filter text dimension by selecting from a dropdown.

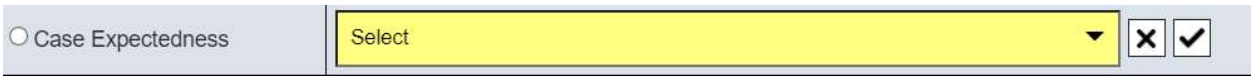
A green dropdown means all values of the dimension are included for the chart:

To select all the available values, click on the button with the checkmark: 

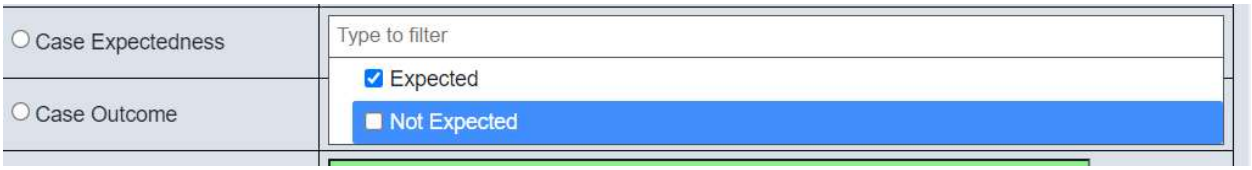
A red dropdown means none of the values of the dimension are included:

To unselect all the available values, click on the button with the X: 

A yellow dropdown means that some of the dimension’s values are included or the chart:



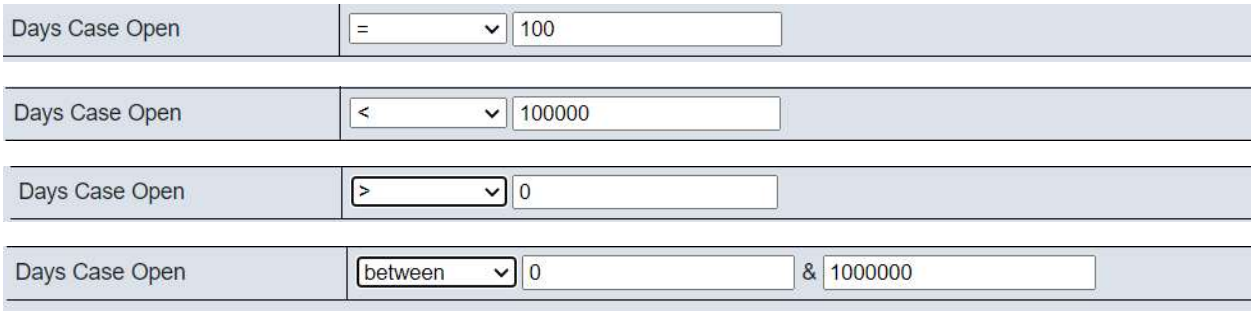
To search for text to filter on (or filter out), start typing in the dropdown where the word “Select” appears:



Filtering numbers

If a dimension has been set as a "Range" (numeric) by the admin (shown below), then there are several filters available

User can search for records where a dimension's values match a specific number, are greater than or less than a number or between a range:



Filtering dates

When a dimension has been set as date by the admin, there are several options for filtering.

Dates in a dimension could be in one of the three formats:

YYYYMMDD

YYYYMM

YYYY

The first option is to use "custom date range:

Here, the "From" and "To" are filled with the range of the dimension's data, by default. User can also change this range, but cannot select a date that is earlier than data available, or later than the data available.

The other filtering options are dynamic (very useful when the report is saved and can be run on different days):

Latest Day – Data is selected for the latest day's of data available.

Latest 7 days - Data is selected for the latest seven days' of data available.

Latest 30 days - Data is selected for the latest thirty days' of data available.

Current Week -Data for the current week. The Admin has to provide that day the week start's on (eg: Monday). Then data is provided from last Monday to the day the report is being run. If the report is being run on a Monday, then it would only show the data for today.

Previous Week – The full seven days for the last complete week. In case the week begins on Monday, this would mean the last Monday to Sunday available.

Current Month – Data for the current month. IF the report is being run on the 14th of March, the report would include data from March of this year only.

Previous Month - The full month prior to the current month, from the first to the last day.

Current Year – the current calendar year. Data is returned form Jan 1to today's date.

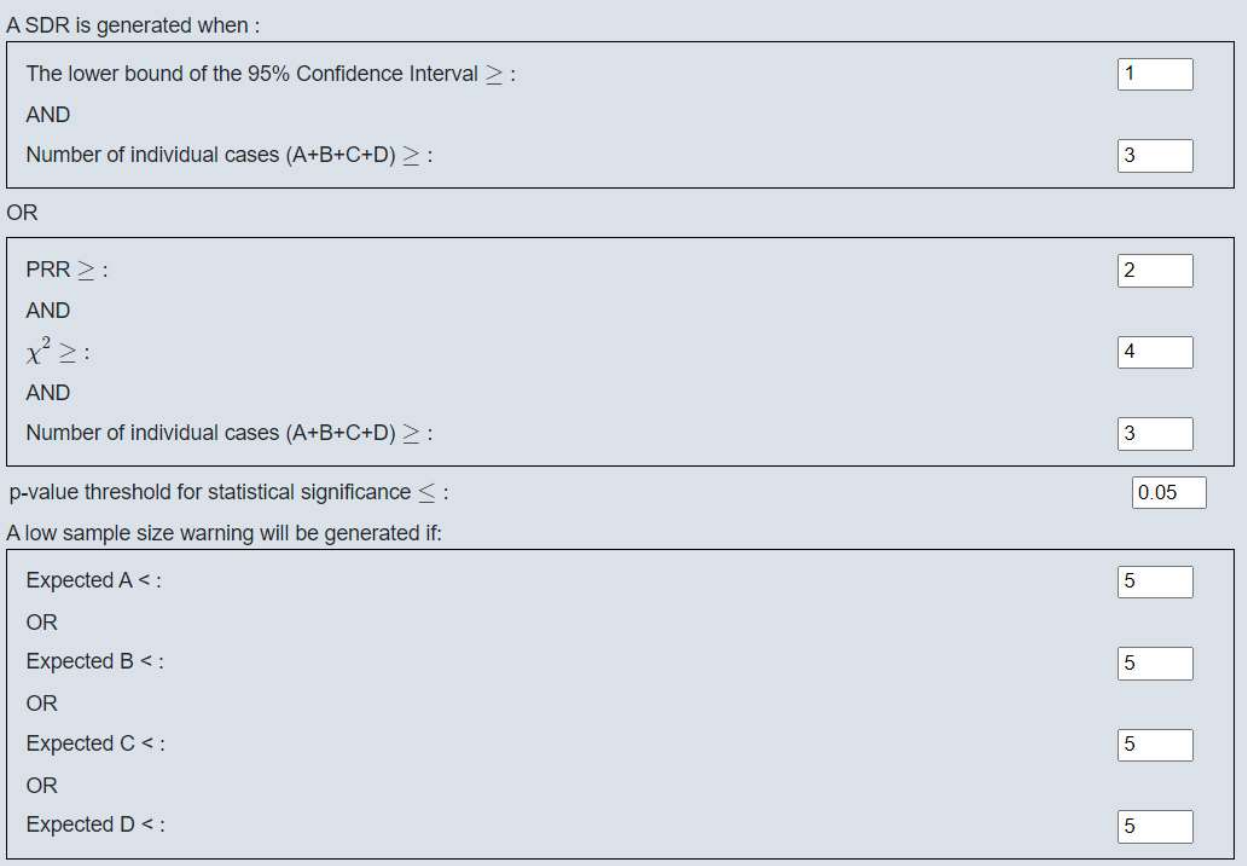
Previous Year – Data is returned (if available) for the full year prior to the current year.

Thresholds:

Thresholds are applicable for "Signals of Disproportionate Reporting" and "Disproportionality Analysis between 2 drugs".

Thresholds are found at the bottom of the Configuration tab.

Signals of Disproportionate Reporting



All the numbers in the textboxes are default and can be changed.

Signals of disproportionate reporting are generated when the above conditions are met.

So in the first box, both of the conditions have to be met.

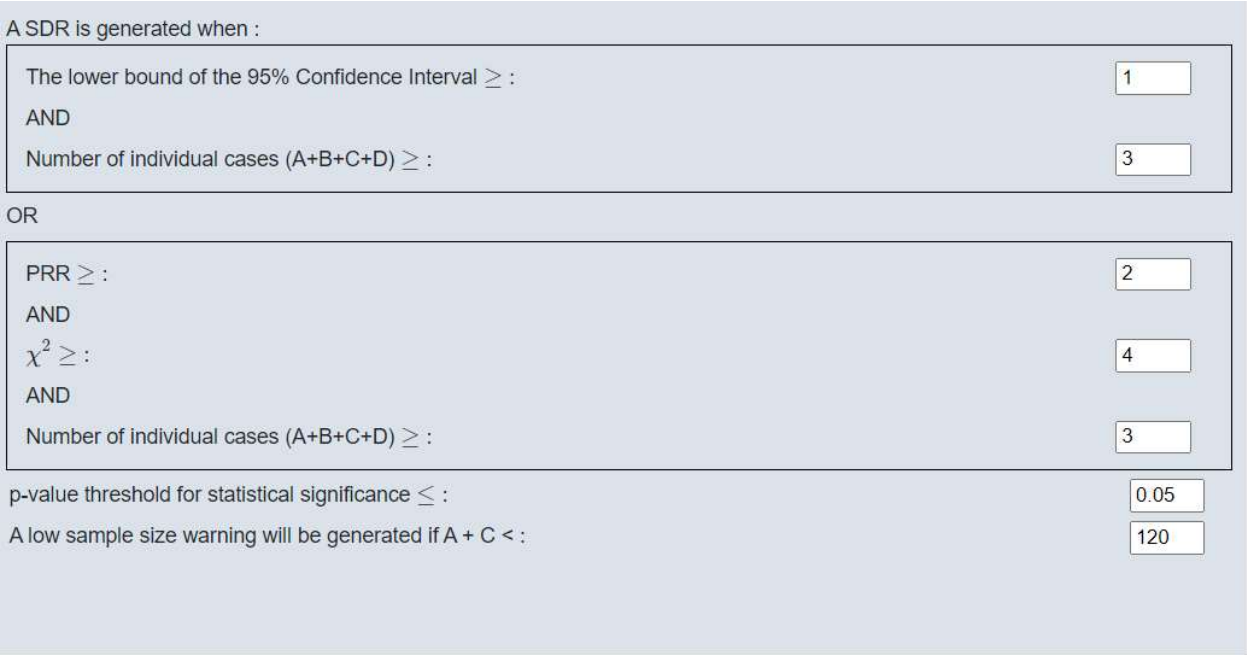
Or, all 3 of the conditions are met in the second box.

If SDR is generated, then the PRR and $\chi 2$ (Chi square) will be in red.

If p-value is equal to or lower than the threshold value, then it too appears in red as there is a statistical significance in the relationship, that bears further scrutiny.

If any of the conditions are met in the last box, then a low sample size warning tooltip will appear in the Notes (last) column.

Disproportionality Analysis between 2 drugs

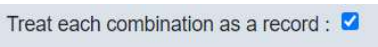


The threshold for this report is a little different but all other thresholds are the same as the previous report.

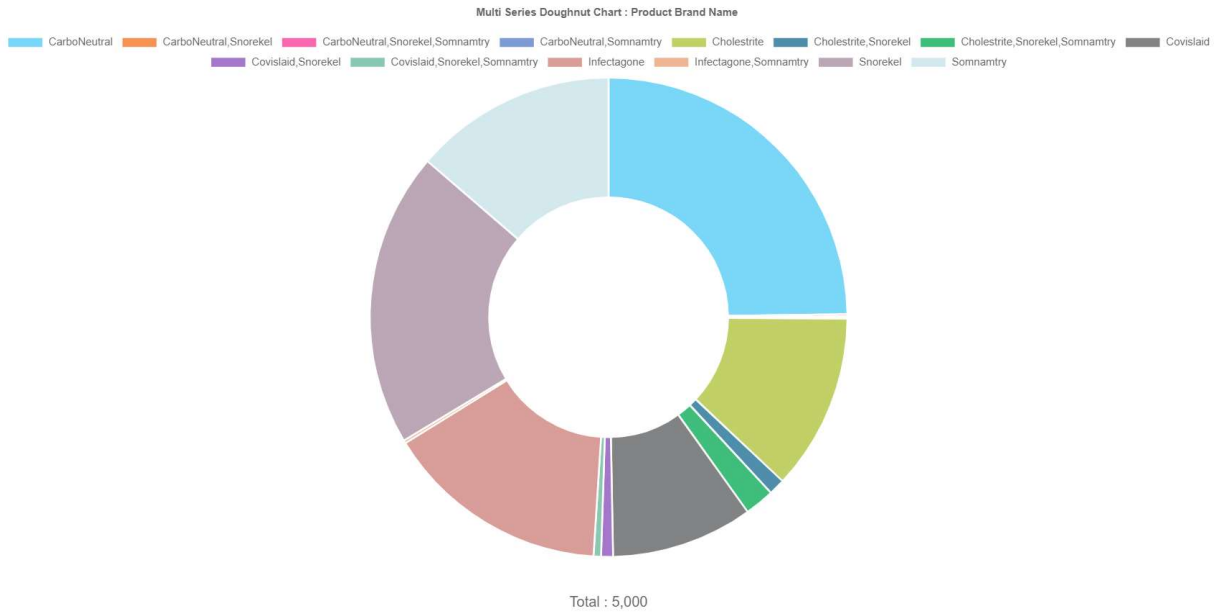
Data with multiple concurrent values:

In some cases, there may be data that has some dimensions with multiple value for each record.
As an example, there may be cases where patients have received multiple drugs. So, each patient record can have one or more drugs.

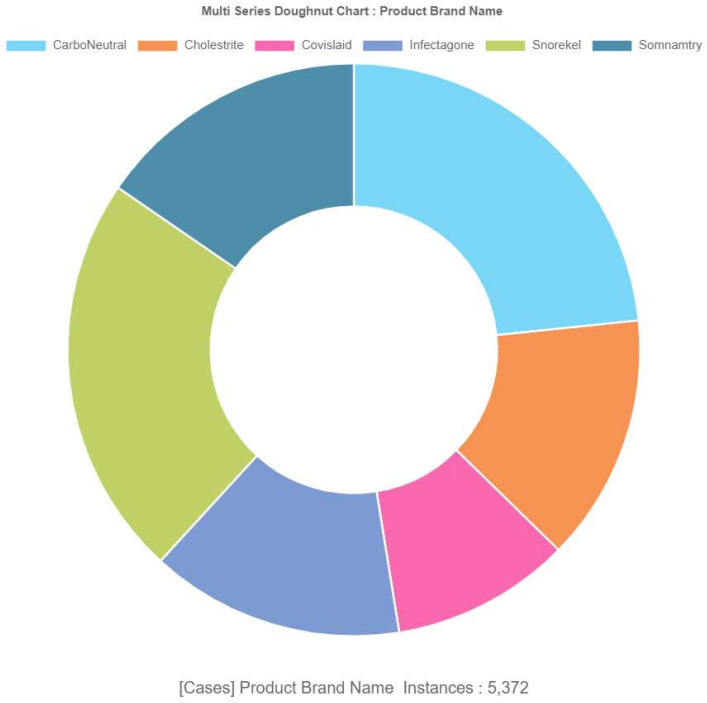
By default, “treat each combination as a record” is selected.



This means each combination of drugs will be segmented on the chart:



Here, Drug A has a segment Drug B has a segment, and Drug A + Drug B is yet another segment. In contrast, when “treat each combination as a record” is unchecked, the chart looks like:



Where each usage of drug is counted. This can lead to overcounting. In the example above, there are 5,000 cases, but 5,327 instances (counts of drugs listed, as a given case can have multiple drugs listed).

Data tab

The data tab is the second tab on the right . 

It is only visible if a chart has been generated.

The data tab offers a few features:

Export to Excel: For charts that are grid /table based, the user is able to export the chart to Excel.

Export to ToroViewer: The report that has been generated will be exported to a HTML file that can be sent to users, clients, and other stakeholders.
It has limited functionality, but retains the interactivity in the chart.

For more information, please see the ToroViewer User Guide.

Save Report as: Please see the section titled “Saving Reports”

Confirmation Report: Once a chart has been generated, there may be a need to look at the underlying records that were used for the chart. This option creates a report listing all the records used in the chart.
The report format is determined by the administrator using ToroAdmin.

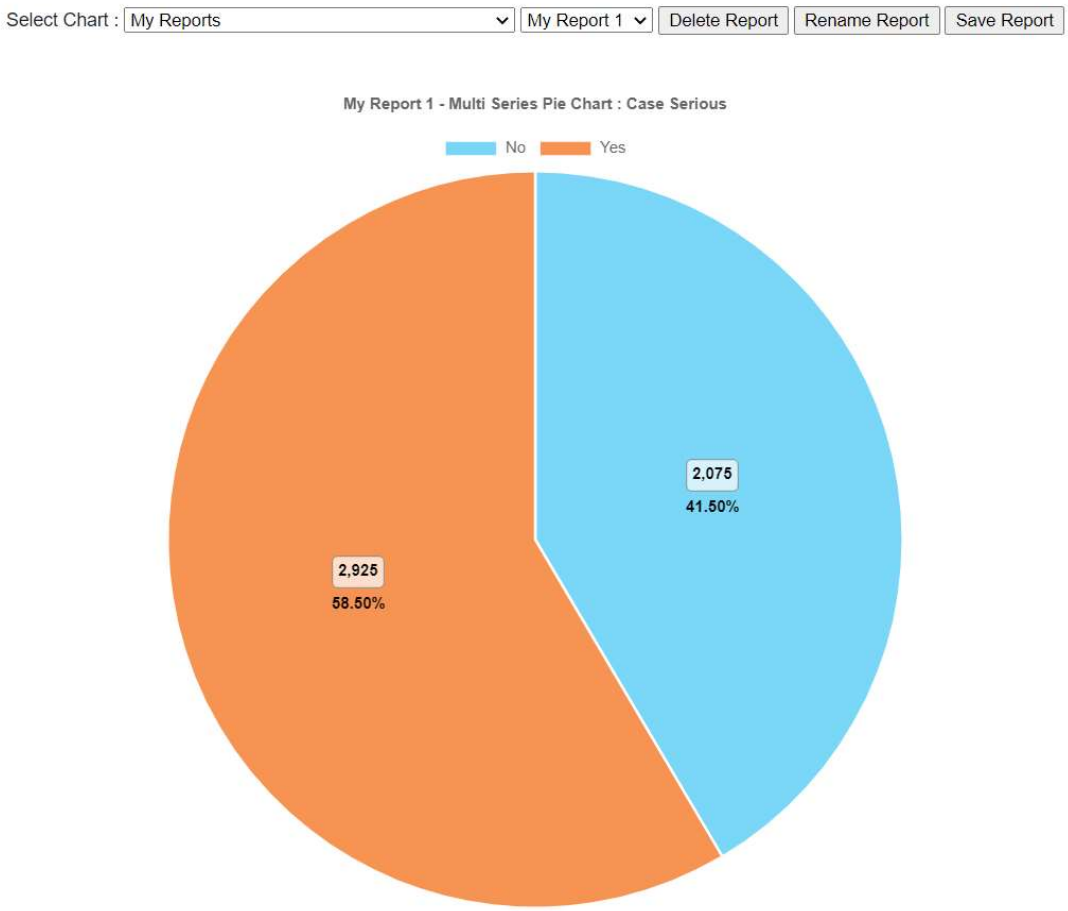
My Reports

Saving reports

Every user can save a report for their own usage (it is only visible to them).

To save a report, user has to:

a. Generate a chart
b. Go to Data tab and click on “Save Report As”
c. Provide a name for the new report.
d. The option “my Reports” will be added to the dropdown at the top of the screen
e. Whenever the user goes to Torocube, the option for “My Reports” will be selected by default. To generate the report, user will have to go to the Configuration panel and click on “Generate”



Deleting a saved report

User can delete a report they have saved by clicking on “Delete Report” in “My Report” screen. Deleted reports can not be retrieved or undeleted.

Renaming a saved report

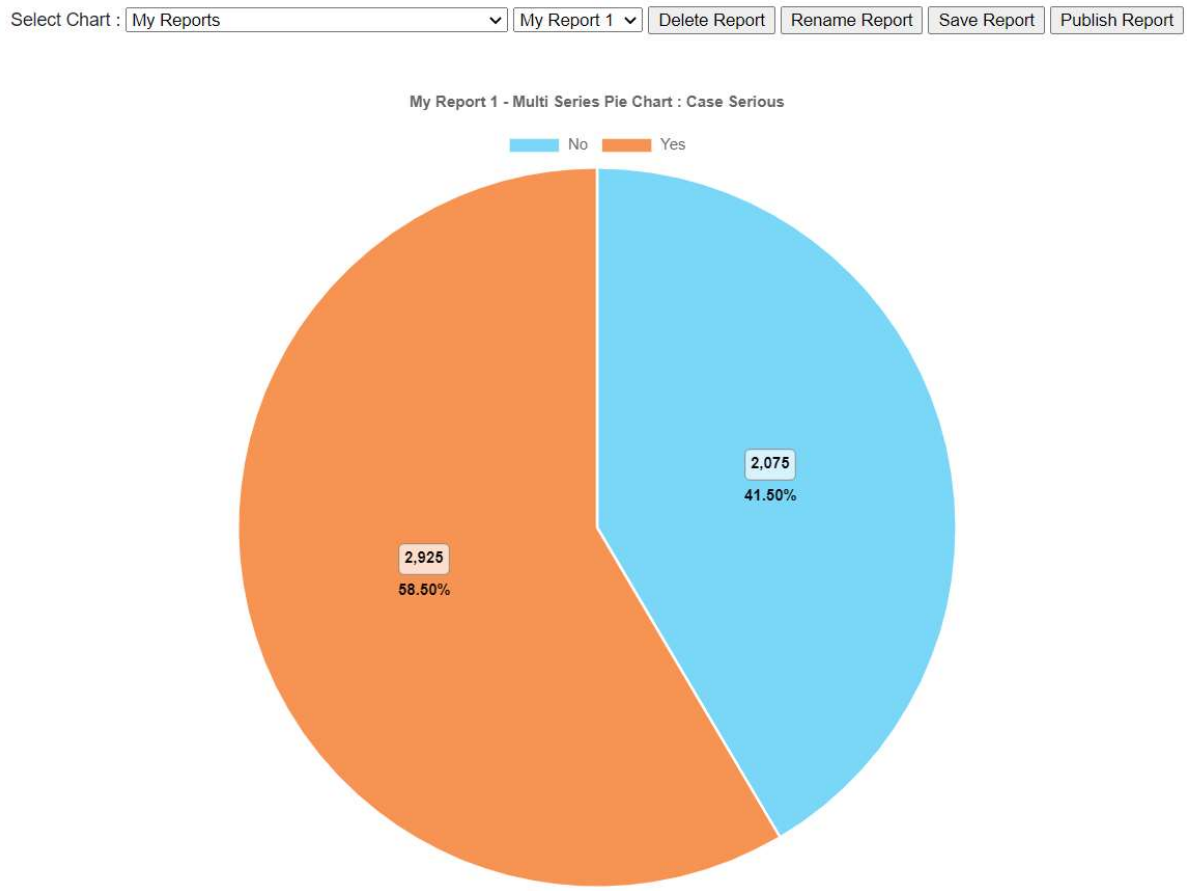
User can also rename an existing report (that was created by the user and is under “My Reports” by navigating to the report and clicking on “Rename Report”.
User is asked to provide a new name for the report.

Modifying a saved Report

User can also take an existing saved report and make changes to it and save it with the new changes.
User is prompted “This will overwrite the existing report. Proceed?” before the report is overwritten.

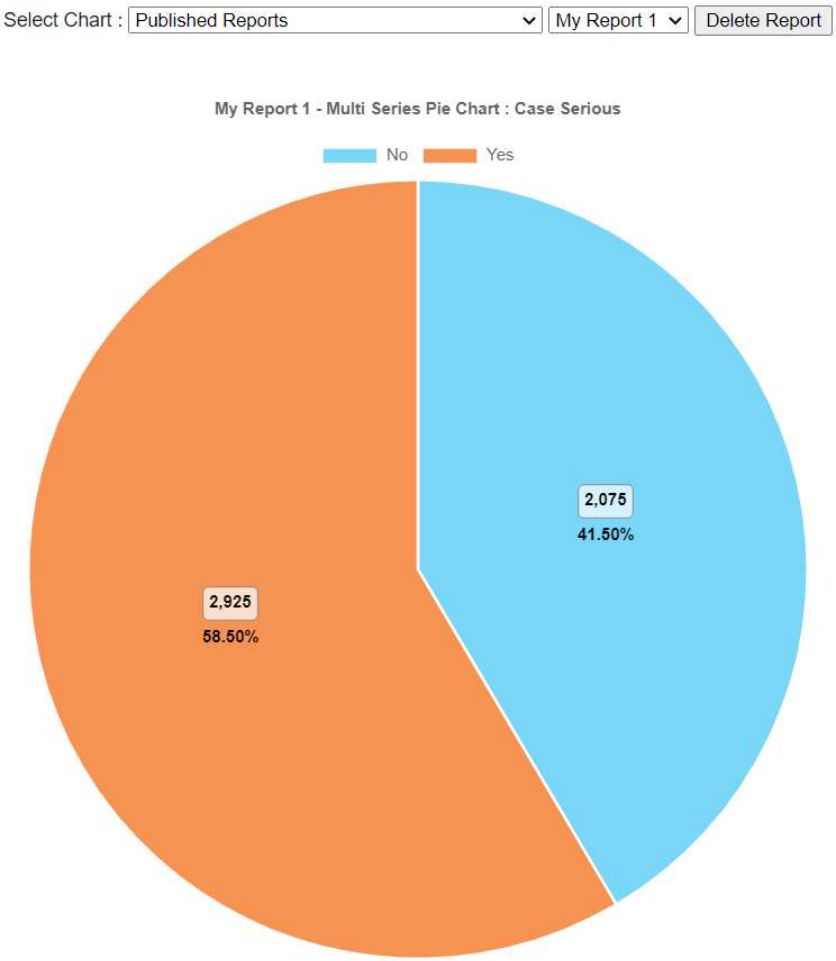
Publishing a Report

If a user is set up as and Admin in ToroCube, then the user can take a saved report and publish it.
A new entry “Published Reports” appears in the main dropdown and this published report appears there.
For the admin, this report has moved from “My Reports” to “Published Reports”



Published Reports

Published reports appear under the dropdown item “Published Reports”
A published report can be seen and generated by every user of ToroCube.
An Admin also sees the “delete” button, and can delete a published report so no one can access it anymore.
Other users can only generate the published reports. They cannot make changes or delete them.


Select Chart :
Published Reports
My Report 1
Delete Report
My Report 1 - Multi Series Pie Chart : Case Serious
No
Yes
2,075
41.50%
2,925
58.50%

Summary of chart types and their attributes

Chart Type	Data Levels	Count for Top "N"	Stack on chart	Stack on top "N"	Export Type	Confirmation Report	Combination as Record option	Values on chart option	Logarithmic axis	Zoom/ Pan
Bubble Chart	Needs 3 facts (measures)	**Yes**			Image	Yes	**Yes**	**Yes**	**X-axis Y-axis**	**Pan**
Doughnut Chart	4	All 4 levels			Image	Yes	Yes	Yes		
Geo Map	World map. Drill to USA & Canada				Image	Yes		Yes		
Horizontal Bar Chart	1	Yes	Yes	Yes	Image	Yes	Yes	Yes, and percentages	Y-axis	Zoom Pan
Line Chart	1	Yes	Yes (Cumulative and distinct lines)	Yes	Image	Yes	Yes	Yes	Y-axis	Zoom Pan
Multi-Dimensional Grid	4	1st Level only			Excel	Yes	Yes			
Multi-Dimensional Matrix	4 (2 vertical, 2 horizontal)	1st vertical level & 1st horizontal level			Excel	Yes	Yes			
Pie Chart	4	All 4 levels			Image	Yes	Yes	Yes		
Polar Chart	1	Yes			Image	Yes	Yes	Yes		
Radar Chart	1	Yes	Yes	Yes	Image	Yes	Yes			
Scatter Chart	Needs 2 facts (measures)	Yes			Image	Yes	Yes	Yes	X-axis Y-axis	Zoom Pan
Tree Chart	4	1st Level only			Image	Yes	Yes			Zoom
Venn Diagram	Up to top 4				Image	Yes				
Vertical Bar Chart	1	Yes	Yes	Yes	Image	Yes	Yes	Yes, and percentages	Y-axis	Zoom Pan
Disproportionality Analysis between 2 drugs	2 Products vs. MedDRA hierarchy				Excel Image	Yes			X-axis Y-axis	Zoom Pan
Dynamic PRR Report	Product vs. MedDRA hierarchy element				Excel Image	Yes			Y-axis	Zoom Pan
Signals of Disproportionate Reporting	Product vs. MedDRA hierarchy				Excel Image	Yes			X-axis Y-axis	Zoom Pan
Disproportionality Analysis between 2 drugs	2 Products vs. MedDRA hierarchy				Excel Image	Yes			X-axis Y-axis	Zoom Pan

About ToroCube

ToroCube is an analytical package that work with data in SQL Server and Oracle databases. ToroCube run on Microsoft's Internet Information Server.

ToroCube can be integrated with any web site/application that runs on IIS.

For more information, please contact us at torocube@infovert.com or at 416-801-0725.

Suite 214, Eglinton Ave. East
Mississauga, ON L4W 0L9
Canada