

# **DataMontage™**

**Version 4.2**

## **User's Guide**

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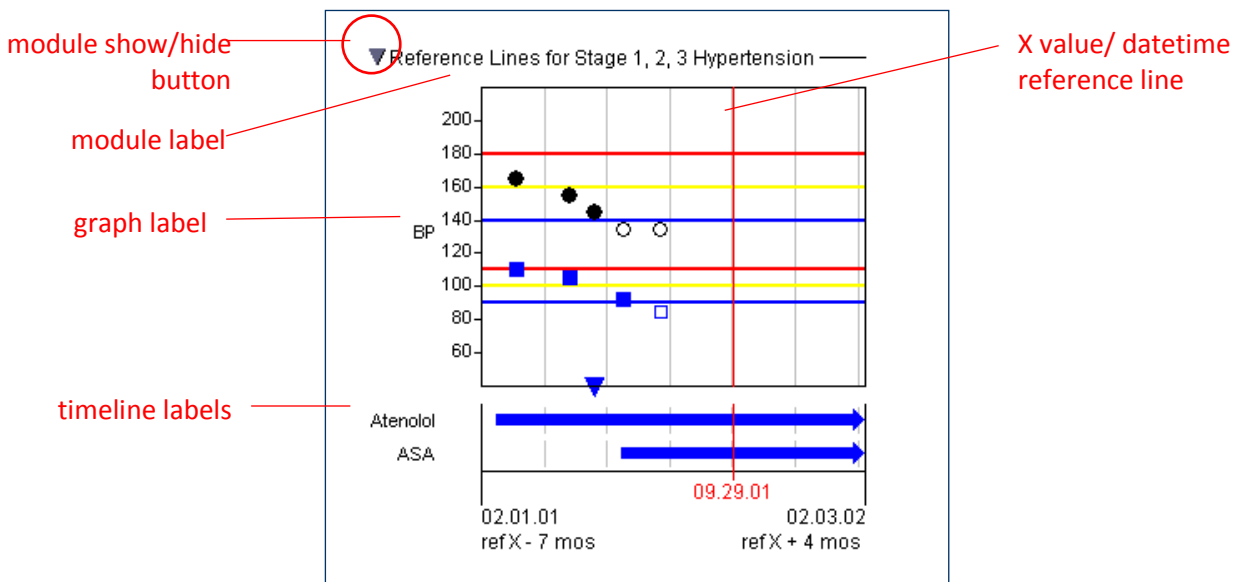
# 1 Getting Started

## 1.1 Overview

The DataMontage™ software system is a collection of software applications and libraries that enable you to create, display, and print information-dense collections of timelines, XY graphs, and notes that share a common X or time axis. Each DataMontage *graph container* contains one or more vertically-stacked *modules*, and each module contains one or more XY graphs or timelines. Each XY graph displays data points that represent the value of a numeric value measured at a point in time or at a particular floating point X value. Each timeline contains data points and/or intervals. Each data point describe an event or measurement associated with a single point in time or floating point X value, and each interval describes an event or condition that spans a period of time or range of floating point X values.

Within each module, you can stack graphs and timelines vertically or arrange them in rows and columns to see patterns spanning multiple variables. Timelines can be organized within a hierarchy, so you can click a button to show or hide the timelines that are the children of a parent timeline. Flexible control over the color, shape, and size of the graph and timeline symbols lets you encode multiple attributes and highlight significant data points. Custom icon support lets you draw data points using image icons, text strings, or arbitrary graphics drawn by custom drawing software. Colored lines and regions help you compare data points to reference values, time intervals, and ranges.

In the example below, the container contains one module that contains one graph and two timelines.



DataMontage lets you see additional information associated with each graphical data element using mouse rollovers, popup HTML windows, and navigation to other web pages. Your Java applet, application, or web server application can configure the content and format of DataMontage objects via Java application programming interface (API). Programs written in Java or in other languages can configure DataMontage displays by creating Extensible Markup Language (XML) files, optionally compressed in ZIP format. DataMontage also supports custom user interactivity by providing an API that enables menu items to be added to the context menu. You can define and select custom, pre-defined graph subsets to filter large datasets. For

example, you can view subsets of a patient's diagnoses, labs, and medications graphs and timelines related to certain medical problems or clinical specialties. You can also create custom, pre-defined queries and highlight the data points and/or time intervals that satisfy certain selection criteria. For example, a data point query could draw a circle around every data point in any timeline that is related to the currently-selected data point, using a custom comparison function.

DataMontage provide three programs for displaying interactive DataMontage graphical displays:

- The DataMontage **Viewer** application enables you to open, display, print, save, and create image files from DataMontage graphical displays read from a file system or accessed via web server. The Viewer can be run as a desktop application or via Java WebStart using all-permissions.
- The DataMontage **WebViewer** application enables you to display DataMontage graphical displays accessed via web server. The Viewer can be run using Java WebStart using sandbox permissions.
- The DataMontage **Java applet** enables you to display DataMontage graphical displays within Web browsers, accessed via web server. The applet can be run using the web browser's Java plug-in using sandbox permissions.

You can also view interactive DataMontage displays using **custom** Java software applications or applets that embed the DataMontage software library.

The DataMontage **Editor** enables you to create and edit the content, layout, and appearance of graphical displays easily. You can use the Editor to create graphical displays to review data, create graph mockups, and create graph templates that are populated with data by a software application that embeds the DataMontage run-time library.

## 1.2 Configuration Requirements

RAM	2 GBytes
Free disk	20 Mbytes (this does not include disk space needed for Java 7 or Java 8 (installed separately)).
Display monitor resolution	1024 x 768 pixels or higher
Display monitor colors	8 bit color or higher
Video memory	2 Mbytes
Operating System	Windows XP, Windows Vista, Windows 7, Windows 8 DataMontage software is written in pure Java, but the software distribution provides only Windows command files for launching the DataMontage Viewer and Editor desktop applications. The DataMontage applet runs on other operating systems such as OS X for Macintosh computers.

## 1.3 Installing DataMontage

Before installing a new version of DataMontage, uninstall any previous versions of DataMontage. If you need to run multiple versions of DataMontage on your computer, copy the entire previous installation folder to another location on your computer's file system before uninstalling a previous version.

To install a new version of the software, run the DataMontage installation program file (e.g.,

datamontage\_4.2.exe). By default, the installation program installs the files in the *installation folder* whose default location is *c:\Program Files\Stottler Henke\Datamontage 4.2*.

#### 1.4 Uninstalling DataMontage

To uninstall the DataMontage software, select the *Add or Remove Programs* or the *Programs and Features* menu item from the Windows Control Panel. In the list of programs, select *DataMontage* and press the *Change/Remove* button. If DataMontage is not listed, run file *uninstall.exe* in the DataMontage installation folder.

#### 1.5 Launching the DataMontage Viewer as a Desktop Application

To invoke the DataMontage Viewer as a Desktop Application, select *DataMontage/Viewer* from the Windows *Start/All Programs* menu. This action runs Windows command file *runDataMontageViewer.bat* in the DataMontage installation directory. It invokes the Java run-time system, and it launches the DataMontage Viewer application. This command file and the DataMontage Viewer application both accept an optional command argument that specifies the name of the DataMontage file to be displayed.

By default, the DataMontage installation program associates *.dm* files with the DataMontage Viewer application. Thus, you can open a DataMontage *.dm* file within the Viewer by double-clicking on the icon of a DataMontage *.dm* file in Windows Explorer. To associate *.dm* files with the DataMontage Editor instead of with the Viewer, select *Default Programs* from the Windows Start menu and then click on *Associate a file type or protocol with a program*.

**Note:** If you are viewing DataMontage graph containers that contain custom user interactions that rely on certain Java classes and methods, edit this command file to include the appropriate Java libraries using the Java *-cp* switch. If you use the SQL query operations feature to populate a graph container with data from a SQL database, edit the command file to include any Java Database Connectivity (JDBC) driver library files needed to access the database. To run procedures that require large amounts of memory, use the Java *-Xms* and *-Xmx* switches to control memory allocation. If you use DataMontage in combination with different Java libraries, you may find it useful to create additional Windows command files with different settings.

#### 1.6 Launching the DataMontage Viewer and WebViewer using Java WebStart

The DataMontage Viewer and WebViewer applications can be launched using Java WebStart to access and display a DataMontage file stored on a remote web server. The Viewer accepts an optional command argument that specifies the URL of the Java Network Launch Protocol (JNLP) file that specifies Java WebStart launch parameters. The WebViewer accepts a required command argument that specifies the URL of the JNLP file. The URL must begin with "http:" or "https:". Example JNLP files are included in folder *\examples\javaws* in the DataMontage software distribution.

On client computers, configure your Web browser to associate *.jnlp* files with your Java Webstart executable (on Windows) or app (on MacOS). The Web server on the remote host should be configured so that all files with the *.jnlp* file extension are set to the *application/x-java-jnlp-file* MIME type.

If you are not using a proxy Web server, you may find that using a direct network connection improves performance. To specify a direct connection, open the Java Control Panel, click the Network Settings button on the General tab, and then select the Direct Connection radio button.

#### 1.7 Java

Datamontage 4.2 requires pre-installation of Java 7 or Java 8. You can download the Java software distribution from <http://www.java.com/>.

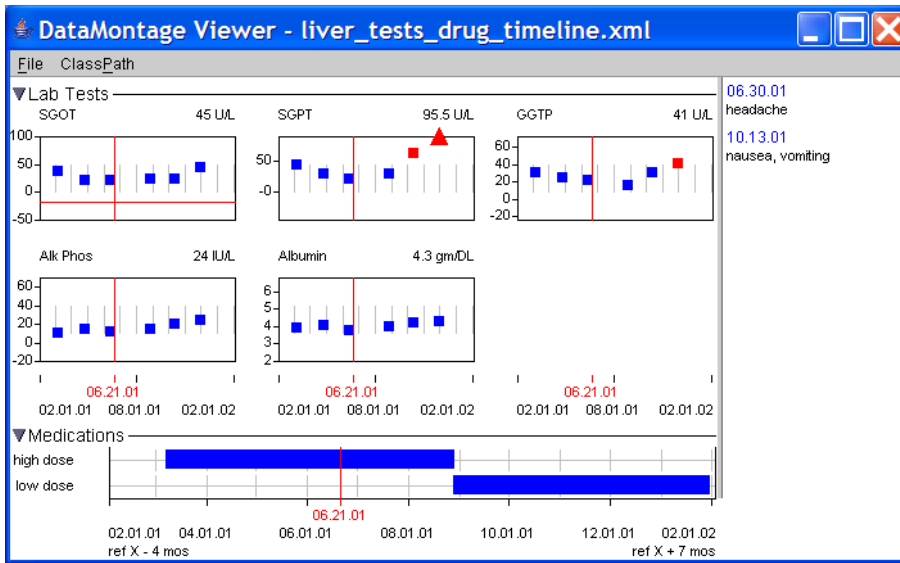
## **1.8 Third Party Software**

Datamontage 4.2 requires no third party software other than the Java run-time system.

## **1.9 Displaying the *About DataMontage* Dialog**

The About dialog shows the version number and creation date of the DataMontage display software. To display the About dialog, click the mouse over the DataMontage display. Then, type control-A by pressing the control key and the A key simultaneously.

## 2 DataMontage Viewer



The DataMontage Viewer is a Java application that enables you to display and print an interactive DataMontage graph container whose configuration is stored in a file. You can also populate the graph container with data according to SQL query operations specified in the configuration file. To invoke the viewer as a desktop application, select *Programs/DataMontage/Viewer* from the Windows *Start* menu. Or, double-click on the icon of a DataMontage .dm file in Windows Explorer. To associate .dm files with the DataMontage Editor instead of with the Viewer, select *Default Programs* from the Windows *Start* menu and then click on *Associate a file type or protocol with a program*.

The *File* menu provides the following menu items:

<i>Open</i>	Displays a file selection dialog that prompts you for the DataMontage configuration file to open and display. You can select either a configuration file (with .xml file extension) or a Zip file (with .dm or .zip file extension) that contains the XML configuration file. In the latter case, the .dm or .zip file and the configuration file inside it must share the same name, with a different file extension. The Viewer determines the preferred height of the graph container, based on the preferred (or default) heights of the container's graphs and timelines.
<i>Save As...</i>	Displays a file selection dialog that prompts you for the file in which to save the DataMontage configuration in XML format. In addition, some changes entered via the DataMontage GUI, such as setting non-linear X axis scales and collapsing/expanding modules, will also be saved to the file. If you use custom popup menu items to change the content or appearance of the DataMontage container object, those changes will also be saved to the file. If you specify a file name that ends with ".zip" or ".dm", DataMontage will save the file in compressed Zip format.
<i>Close</i>	Closes the currently open DataMontage configuration file.
<i>Fetch Data</i>	Applies SQL Query Operations stored in the currently open DataMontage configuration file to populate the DataMontage graph container with data retrieved from the database. Populating the container creates data points, intervals, graphs, timelines, and/or modules from the SQL data. If a database connection has not yet been



	established, the Viewer prompts you to enter a database login and password to create a connection.
<i>Print</i>	Prints the currently open DataMontage configuration file.
<i>Export Image</i>	Generates an image file in JPEG, PNG, BMP, or GIF format. If you generate a JPEG file, you can specify its image quality: Low, Medium, High, or Highest.
<i>Properties</i>	Displays attributes of the graph container, such as its height and width.
<i>Exit</i>	Exits the Viewer application.

The *View/Refresh* menu item instructs DataMontage to re-generate the display. It is usually not necessary to use this operation.

The *ClassPath* menu enables you to select operations that are useful if you are using or testing a DataMontage container whose user interaction has been customized using the user interactivity customization API.

<i>Add</i>	Adds a file folder or JAR file to the class path system folder that contain Java class files that implement the customization
<i>List</i>	Lists the folders and JAR files that have been added.

## 3 Appearance

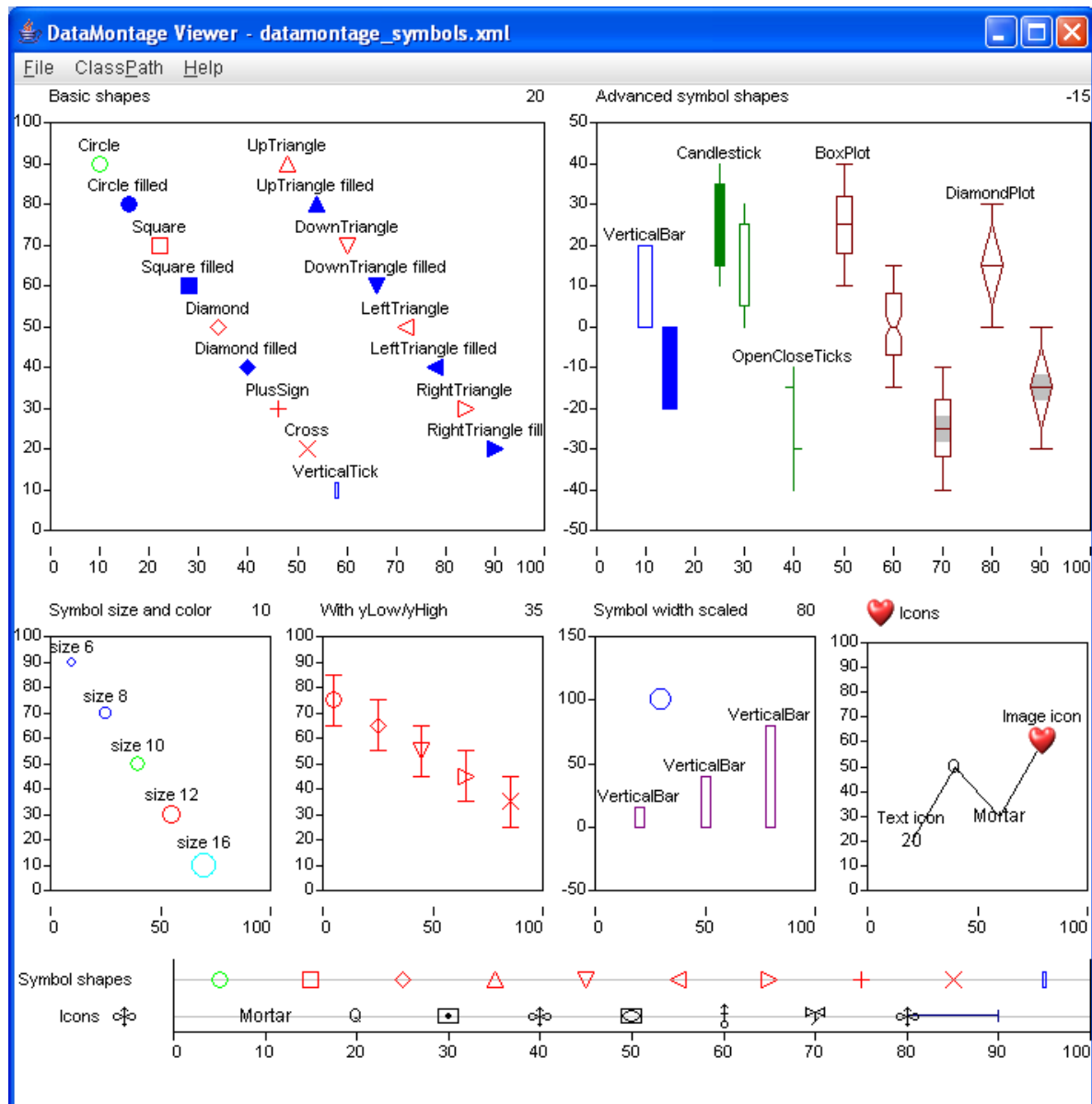
### 3.1 X and X2 Axes

An X axis is displayed at the bottom of every graph container. If any module is configured to display more than one XY graph per row, an X axis is displayed below each graph in the bottom row of graphs.

An optional second X axis can be displayed at the top of the graph container. For example, the primary X axis could correspond to Greenwich Mean Time (GMT), and the X2 axis could show the local time zone. The offset between the X and X2 axes can be configured to change at specified times or X values. Times of offset changes are marked by symbols in the X2 axis. To view the details of the offset change in a tooltip window, hover the mouse over the symbol.

### 3.2 Symbol Groups, Line Groups, and Custom Icons

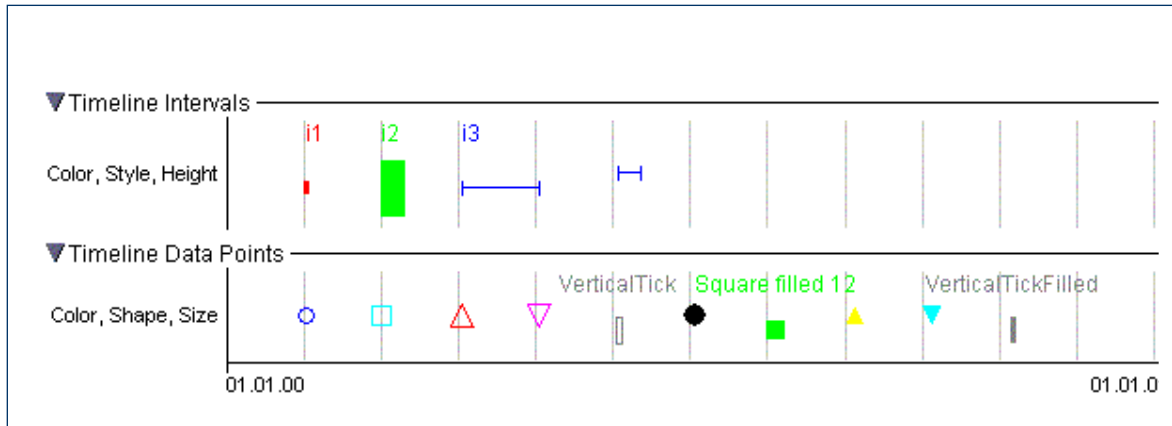
Timelines and xy graphs use symbols to display data points associated with points in time or floating point x values. Each data point can belong to a symbol group that specifies the symbol's shape, size, color, and fill. For example, one symbol group could be used to display values that lie within the normal range. Another symbol group could be used to highlight high values, and a third symbol group could be used to highlight low values. Custom icon support lets you draw data points using image icons, text strings, or arbitrary graphics drawn by custom drawing software. For example, the bottom timeline labelled *Icons* in the figure below shows how icons can display standard Army symbology to show time-stamped events involving different types of military units.



Lines in XY graphs can connect data points that belong to the same variable. Data points connected in this way belong to the same line group which specifies the color and thickness of the connecting line.

### 3.3 Timeline Interval Groups

Timelines can display timeline intervals and data points. The color, style, and height of each timeline interval is specified by its timeline interval group. There are two timeline interval styles: Bar (default) and Whisker. The figure below shows red and green timeline intervals that use a Bar style and two blue timeline intervals that use a Whisker style.

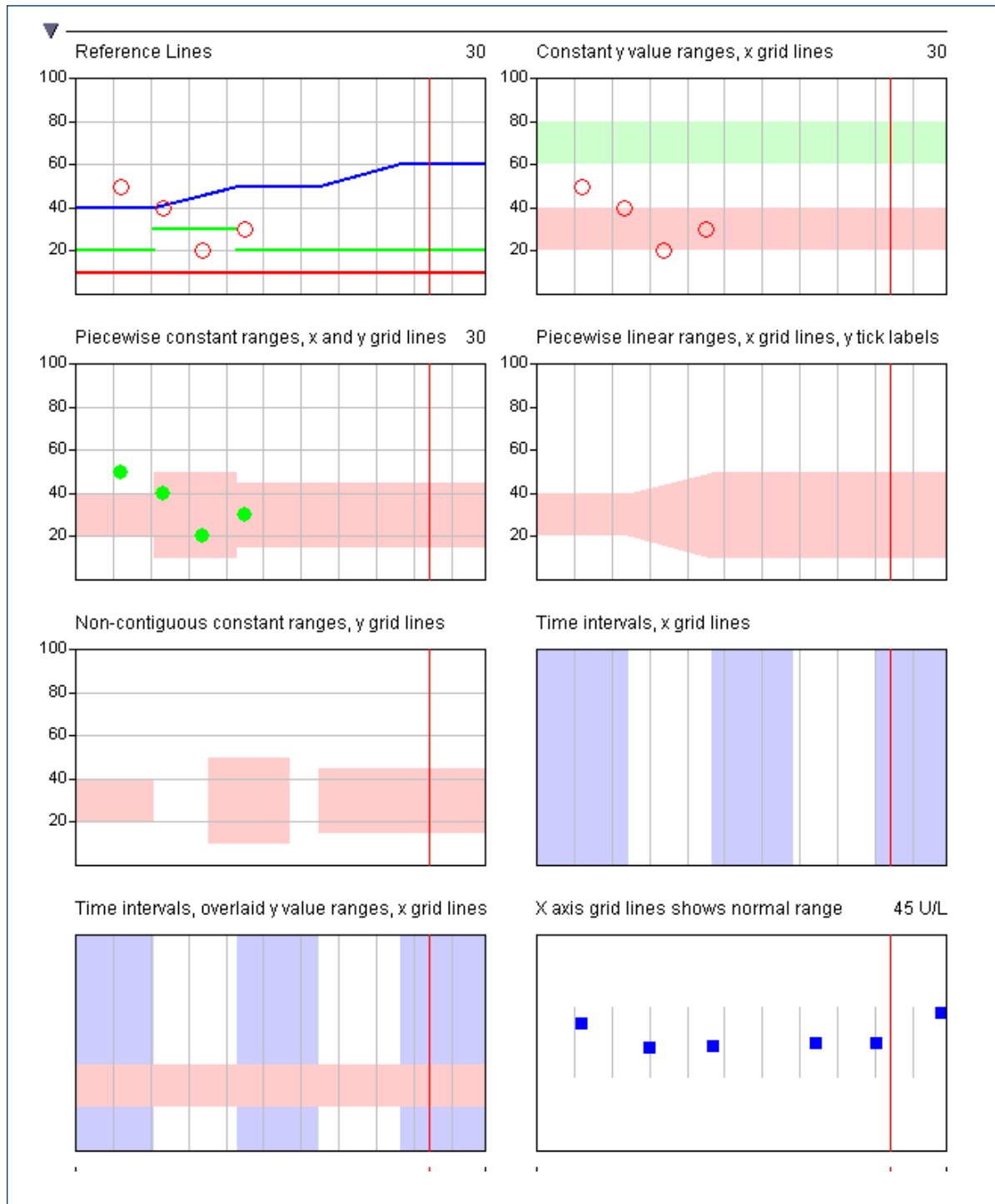


### 3.4 Reference Data - Lines, Regions, and Intervals

XY graphs can display *reference value lines* that help you compare data points to y reference values. In the figure in section 1.1, the red, yellow, and blue reference value lines show constant values and span the range of the graph. Reference value lines can also be straight line segments with zero, positive or negative slope that are bounded by two datetimes or two floating point X values. One or more reference value lines can belong to the same line group and share the same meaning and appearance (e.g., color, thickness, etc.). Graphs can display piece-wise linear approximations to curved reference lines by concatenating multiple reference lines.

XY graphs can display *reference regions* as colored backgrounds that help you compare data points to ranges of x or y values. Reference regions can be bounded horizontally by lower and/or upper x bounds or they can span the entire width of the graph. Regions can also be bounded vertically by lower bound and/or upper y bounds, or they can span the entire height of the graph. The figure at left shows example reference lines and reference regions.

Timelines can display *reference time intervals* as colored backgrounds, bounded by start and end times or lower and upper bounds on x axis values, that help you compare data points to significant time periods or ranges of X values.



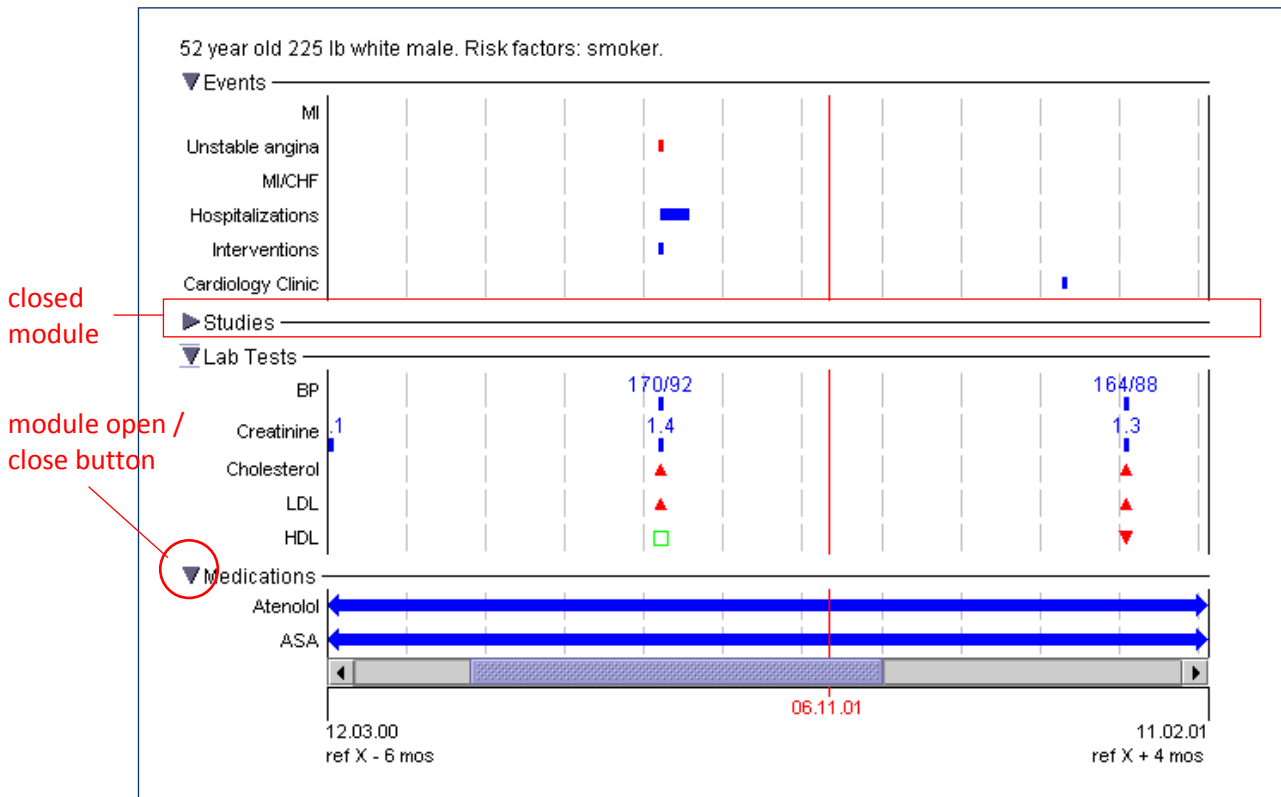
## 4 User Interactions

### 4.1 Zooming and Scrolling

You can scroll forward or backward along the X axis using the horizontal scroll bar at the bottom of the graph container. Or, scroll by press the left or right arrow keys. To zoom in or out, press control-plus or control-minus. Or, use the Zoom context menu item, as described in section 5.3.

### 4.2 Opening and Closing Modules

You can close a module by pressing the left mouse button over the filled triangular-shaped show/hide button in the upper left corner, next to the module's label. It is useful to close some of the modules in a container if the amount of vertical space required by all modules exceeds the height of the container. You can also close modules that lie between two modules that you wish to view next to one another. In the example below, the Studies module has been closed so that the Events and Lab Tests modules are closer to each other.



### 4.3 Opening and Closing Hierarchical Timelines

Timelines can be organized within a hierarchy. When a parent timeline is closed, its children timelines are hidden. The user can click on the unfilled triangle-shaped timeline open/close button to open a parent timeline and see its children timelines. For example, a parent timeline could show summary data, and its children timelines could show detailed data. Labels of hierarchical timelines are left-justified and indented to show their level in the hierarchy. This feature is useful for enabling users to switch quickly between summary and detailed views of the data by opening and closing timelines to show and hide their children timelines.

#### 4.4 Rollover Text

As you move the mouse over a timeline, DataMontage displays additional information in a rollover (tool tip) window. The information that is displayed depends upon the type of graph and whether the mouse cursor is over any display objects. The following table describes default rollover information displayed within timelines:

Object below mouse cursor	Information displayed in rollover window
No object	<p>"X =" followed by the date/time indicated by cursor position</p> <p>Difference between the times and Y values indicated by the cursor position and the x/datetime and Y reference line, if one has been set.</p>
Timeline label	Rollover text that describes the timeline as a whole.
Time interval	<p>"Time Interval" followed by the time interval's label.</p> <p>Start and end time of time interval</p>
Data point	<p>"Data Point" followed by the data point's label.</p> <p>X (time) value of the data point</p> <p>Difference between the times indicated by the cursor position and the x/datetime reference line, if one has been set.</p>

The following table describes rollover information default displayed within xy graphs:

Object below mouse cursor	Information displayed in rollover window
No object	<p>X value (date/time) indicated by cursor position</p> <p>Y value indicated by cursor position</p> <p>Difference between the times indicated by the cursor position and the x/datetime reference line, if one has been set.</p>
Graph label	Rollover text that describes the graph as a whole.
Data point	<p>"Data Point" followed by the data point's label.</p> <p>X value (time) of the data point</p> <p>Y value of the data point</p> <p>Difference between the times indicated by the cursor position and the x/datetime reference line, if one has been set.</p>
Reference value line	<p>"Reference Value Line" followed by label of reference value line's line group</p> <p>X and Y value of the cursor position</p> <p>Difference between the times indicated by the cursor position and the x/datetime reference line, if one has been set.</p>
Reference region	<p>"Reference Region" followed by the label of reference region's group</p> <p>X and Y coordinates of the cursor position</p>

	Difference between the times indicated by the cursor position and the x/datetime reference line, if one has been set.
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If your DataMontage container has been configured with custom user interactions, the rollover text you see may differ from the text specified above.

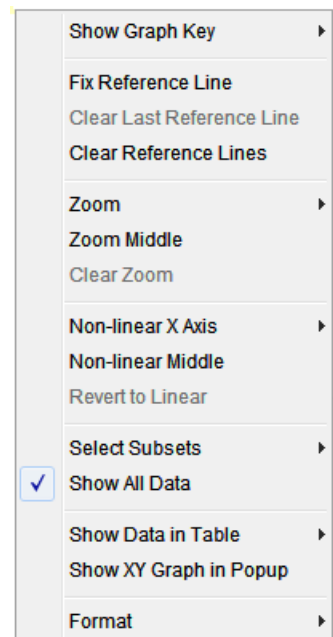
#### 4.5 Popup Details Window

Graph containers can be configured to display a web page within popup details window to show details when the left mouse button is clicked over a graph data point, timeline data point, or timeline interval.

## 5 Context Menu

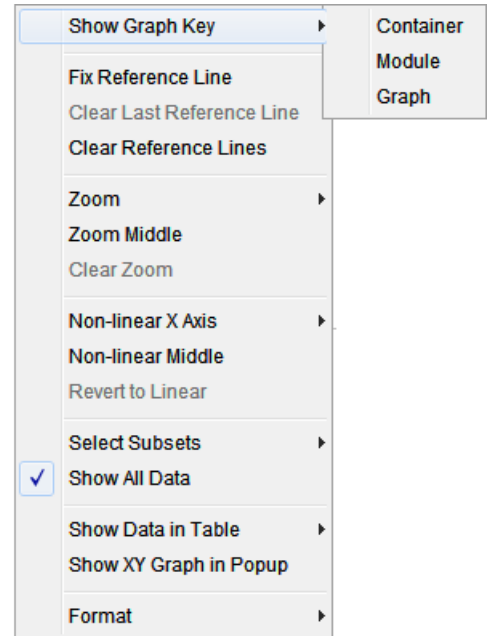
Many DataMontage operations are invoked using a popup, context menu. To invoke this menu, position the mouse cursor over the DataMontage display and press the right mouse button. DataMontage displays the menu shown at right. To select a menu item, move your mouse cursor over the desired menu item and then press and release the left mouse button. DataMontage graph containers can also be configured with custom context menu items. If a particular DataMontage graph container has been configured in this way, additional menu items will appear at the bottom of the popup menu.

A DataMontage container can optionally be configured to show only some of the popup menu items described in this document.

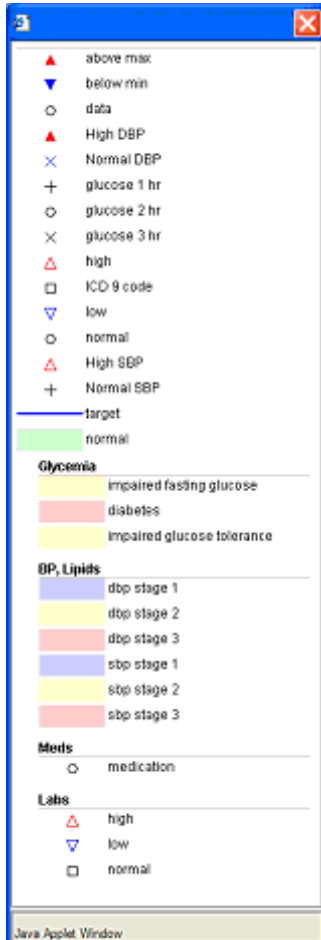


Some of the menu items display a triangle to the right of their label. When you select one of these choices, DataMontage displays a submenu that offers additional choices. For example, if you select the *Show Graph Key* menu item, DataMontage displays a submenu that prompts you to select the type of graph key to display, as shown at right.

In this document, “select the xxx/yyy menu item means select the xxx choice from the main menu to display its associated submenu and then select yyy from the submenu.



### 5.1 Show Graph Key



DataMontage displays three types of graph keys. To display a graph key for the entire DataMontage container, select the *Show Graph Key/Container* menu item. The top of this graph key describes each graphical element (symbol, line, and region group) used across modules in the container. In the example at left, 14 symbol groups (“above max” to “Normal SBP”), the “target” line group, and the “normal” region group apply to any modules in the container.

Below the descriptions of container-wide graphical elements, the graph key describes the graphical elements defined for each module. In the example at left, three region groups are defined for all graphs in the Glycemia module: “impaired fasting glucose”, “diabetes”, and “impaired glucose tolerance”. Below the descriptions of each set of module-wide graphical elements, the graph key describes the graphical elements used by individual graphs or timelines, if any.

You can also display a graph key for the module or graph/timeline specified by the mouse cursor’s position by selecting the *Show Graph Key/Module* or *Show Graph Key/Graph* menu items.

### 5.2 Fix Reference Line

When you press the left mouse button over a graph or timeline, DataMontage displays a red vertical reference line in all graphs and timelines at the datetime or floating point X value specified by the mouse cursor position. In the figure in section 1, a vertical x/datetime reference line is drawn in the graph and in both timelines at the date 09.29.01. After setting an x/datetime reference line, the mouse rollover text shows the difference between the reference line and the datetime or x value indicated by the mouse cursor position.



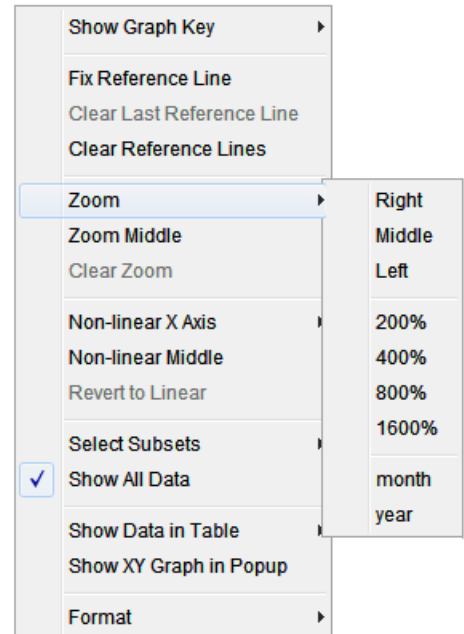
You can *fix* the current x/datetime reference line so that it remains displayed even after you click on another location in the graph. To fix an x/datetime reference line, press the right mouse button over the graph and select *Fix Reference Line* from the popup menu. This feature is helpful for marking X values or datetimes of interest. You can fix up to four reference lines.

You can fix up to four reference lines. To clear all x value/datetime reference lines, press the right mouse button over the graph and select *Clear Reference Lines* from the menu. To clear the last fixed reference line, select *Clear Last Reference Line* from the context menu.

### 5.3 Zoom

A graph container can be configured to enable zooming and scrolling. Press the control-plus key to "zoom in" can get a close-up view of a subset of the data. Press the control-minus key to "zoom out" to see more of the data at a reduced size. When only a subset of the x axis range is displayed by the container, a horizontal croll bar appears at the bottom of the container which you can use to scroll forward and backward through the data.

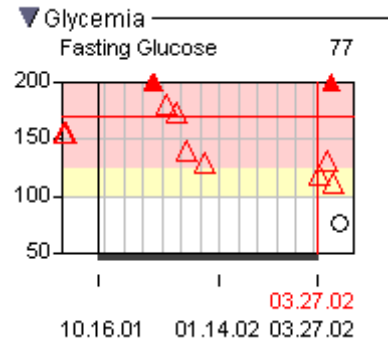
DataMontage provides three ways of specifying the zoom period. First, you can zoom to the time interval specified by the reference timeline and, optionally, the position of the mouse when the context menu was selected via right mouse click. Select *Zoom/Right* to zoom to the time interval to the right of the reference timeline. Select *Zoom/Middle* to zoom to the time interval between the reference timeline and the mouse position. Select *Zoom/Left* to zoom to the time interval to the left of the reference timeline. Selecting *Zoom Middle* from the context menu item is a shortcut for selecting the *Middle* submenu (*Zoom /Middle.*)



Second, you can zoom by selecting a magnification level such as 200%. Third, a DataMontage container may be configured with custom, pre-defined zoom periods that can be selected from the Zoom menu. In the example at right, zoom periods have been pre-defined for *1 month* and *1 year*. To restore the display to normal magnification, select *Clear Zoom*.

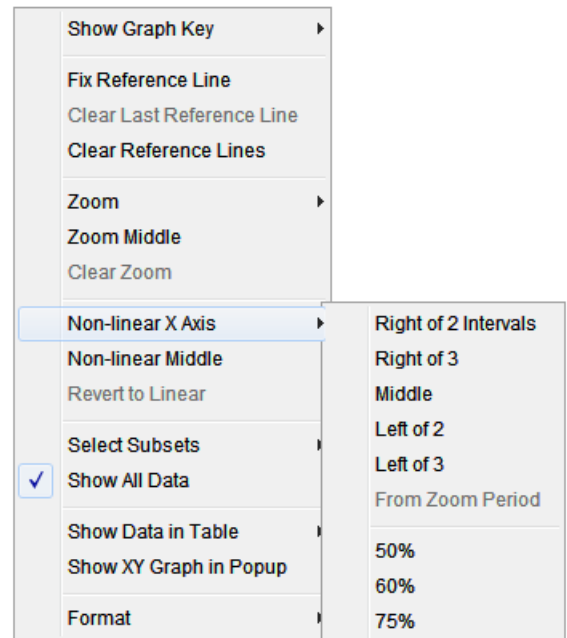
### 5.4 Non-Linear X Axis

DataMontage enables you to specify a time interval (or X value interval) of interest and view the data in this interval using most of the width of each graph or timeline. Data outside of this interval are displayed in a compressed format using the remainder of each graph or timeline. This feature provides a closer look at the data that lie within the interval of interest while still showing data outside of this interval in a compressed format. You can control how much of the width of each graph or timeline is allocated to the interval of interest by selecting 50%, 60%, or 75% from the submenu. When DataMontage displays data using a non-linear x axis, a thick line along the x axis highlights the interval of interest. In the example below, the time interval of interest starts on 10.16.01 and ends on 03.27.02. Data before and after this interval are displayed in a compressed format.



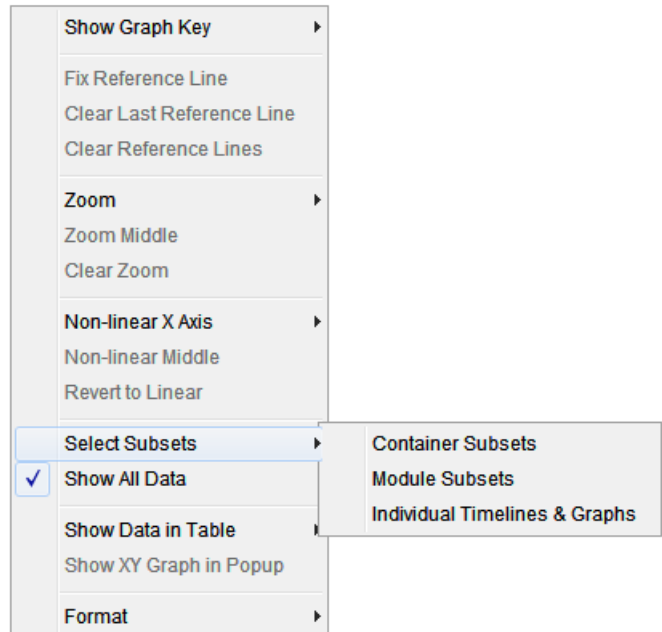
DataMontage provides two ways of selecting the time interval to expand. First, you can expand the displays based on the positions of the x/time reference line and, optionally, the mouse position. There are five submenu items. Submenu item *Right of 2 intervals* expands the time interval to the right of the x/datetime reference line. *Right of 3* expands the rightmost time interval of the three intervals separated by the x/datetime reference line and mouse position. The left and middle intervals are compressed. *Middle* expands the middle of the three intervals, *Left of 2* expands the interval to the left of the x/datetime reference line, and *Left of 3* expands the leftmost interval of the three intervals separated by the x/datetime reference line and the mouse position.

Second, you can select submenu item *From Zoom Period* to expand the interval that is the current zoom period. To restore the display to a linear time scale, select *Revert to Linear*.



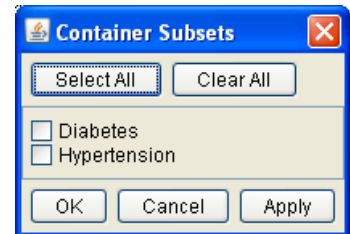
## 5.5 Select Subsets

A DataMontage container can be configured to provide custom *graph subsets* that let you specify that one or more pre-defined subsets of the graphs and timelines should be displayed and all others should be hidden. This feature lets you explore large datasets more effectively by selecting and viewing meaningful subsets. DataMontage provides three ways of selecting a subset of the graphs and timelines for display: container subsets, module subsets, and individual graphs and timelines. To clear the subsets and show all timelines and graphs, select context menu item *Show All Data*.



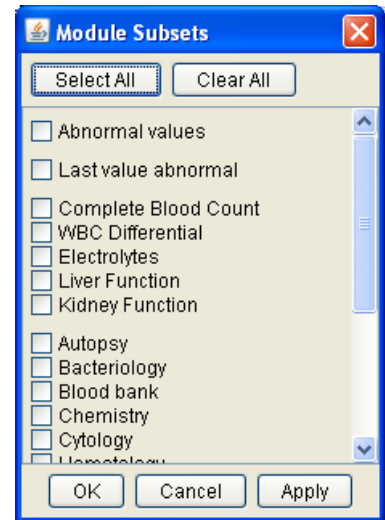
### 5.5.1 Container Subsets

Custom *container subsets* specify a subset of the graphs and timelines that may appear in any of the modules. For example, if a DataMontage container contains timelines that display a patient's diagnoses, medications, and lab data, organized within three modules, a container subset might show a subset of the timelines that are relevant to patients with a particular medical problem, such as diabetes. To select a container subset, select context menu item *Select Subsets/Container Subsets*. Then, in the *Select Container Subsets* popup dialog, select each desired subset by checking its check box. DataMontage will display a timeline or graph if it belongs to any of the subsets you select. The figure at right shows an example check list of custom container subsets.

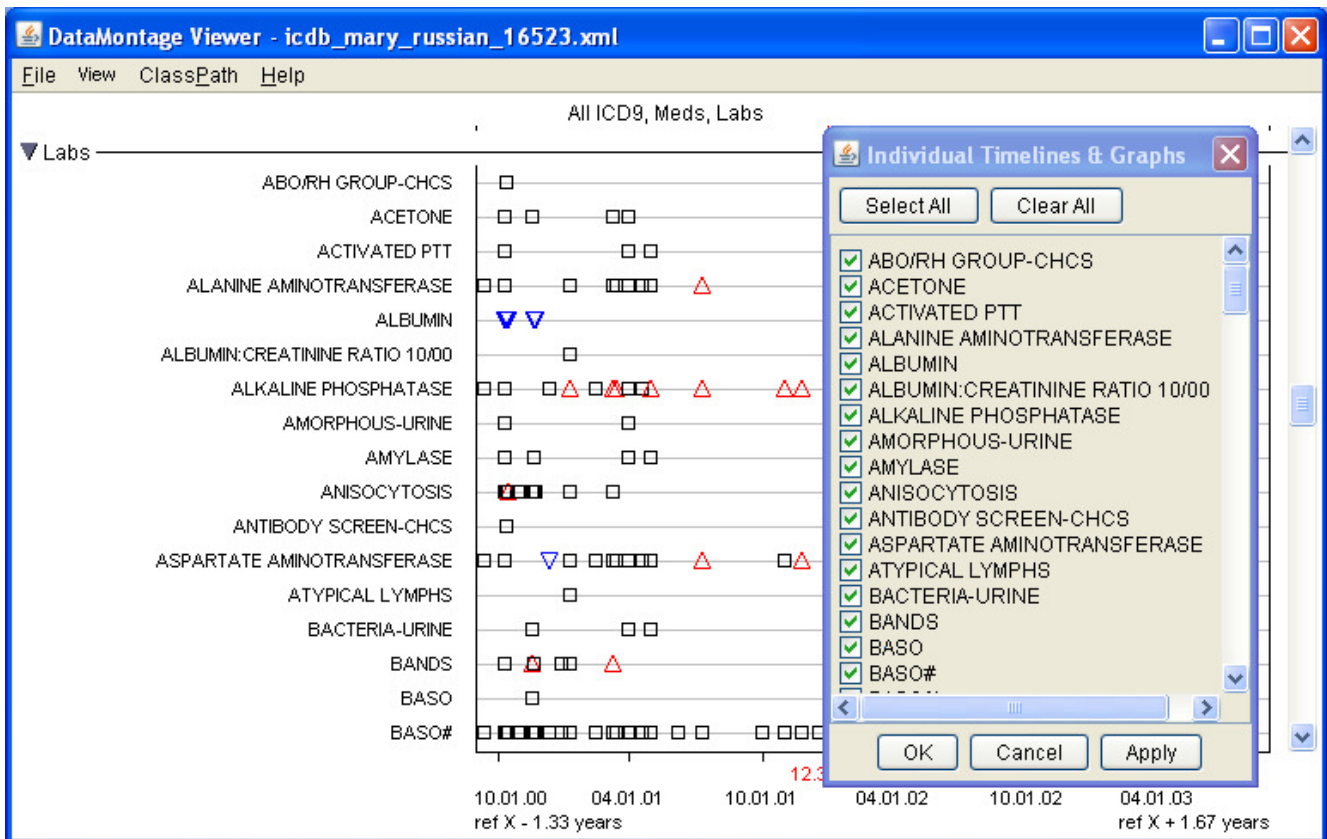


### 5.5.2 Module Subsets

*Module subsets* lets you select one or more pre-defined subsets of the graphs and timelines in the module in which you pressed the right mouse button to show the context menu. For example, if your mouse was positioned over a module containing labs data, subsets could be created that let you select timelines that contain abnormally low or high data values or timelines for lab variables that belong to common lab panels such as Complete Blood Count. To select module subsets, select context menu item *Select Subsets/Module Subsets*. Then, in the *Select Module Subsets* popup dialog, select each desired subset by checking its check box. The figure at right shows an example check list of custom, module subsets.



### 5.5.3 Individual Graphs & Timelines



You can select or deselect individual graphs and timelines in a module for display by selecting context menu item *Select Subsets/Individual Timelines & Graphs*. DataMontage will display a popup dialog that contains one checkbox for each timeline or graph in the current module, labeled with its name. If no subsets have been

selected, all timelines and graphs will initially be checked. If one or more subsets have already been selected, checkboxes corresponding to the timelines and graphs that belong to those subsets will initially be checked.

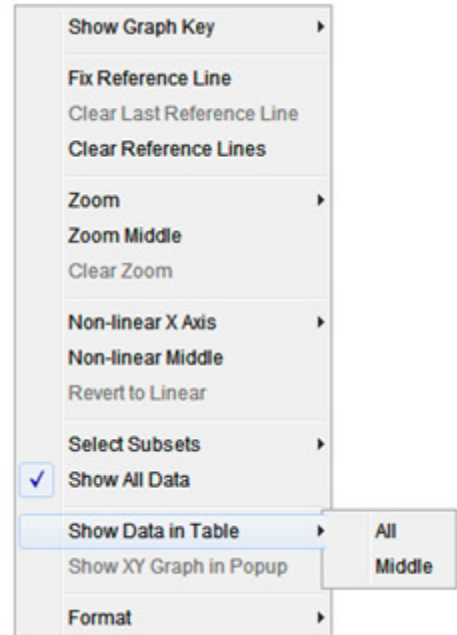
### 5.6 Show Data in Table

Select this menu item to display a popup window that displays a table that shows the data in the current graph or timeline, sorted by X or datetime values. DataMontage displays a submenu that lets you specify which data should be displayed:

- **All** - DataMontage displays all data in the selected XY graph or timeline.
- **Middle** – DataMontage displays only the data that lie between the vertical x/datetime reference line and the x/datetime value specified by the cursor position when you clicked the right mouse button to show the context menu.

If you select this menu item when the mouse is positioned over an XY graph, the popup window will prompt you for the format of the tabular display. You can display one column per:

- **variable** - DataMontage displays the X value of each data point in the left most column. It displays the Y values of data points for each variable in a separate column.
- **common property** – DataMontage displays the values of the data point's commonly-used properties in separate columns.
- **property** – DataMontage displays the values of all data point properties in separate columns.



- data

Display one column per:  variable  common property  property

X Value	Y Value	Variable Name	Symbol Groupd ID	Label	Rollover	Application...
4772.15	22.4	stat	quintile 4	Utah	Education index = -3.69	
5781.76	15.1	stat	quintile 5	Mississippi	Education index = -14.31	
5820.86	21.3	stat	quintile 5	Arizona	Education index = -17.81	
5840.78	19.0	stat	quintile 5	Nevada	Education index = -13.11	
5996.60	17.9	stat	quintile 3	Idaho	Education index = -1.46	
6058.38	15.7	stat	quintile 5	Tennessee	Education index = -8.48	
6076.04	16.0	stat	quintile 4	Oklahoma	Education index = -7.74	
6320.51	17.9	stat	quintile 4	Florida	Education index = -4.41	
6369.69	12.6	stat	quintile 5	Alabama	Education index = -11.11	
6431.80	14.7	stat	quintile 4	Arkansas	Education index = -5.19	
6445.24	15.4	stat	quintile 3	North Carolina	Education index = -4.69	

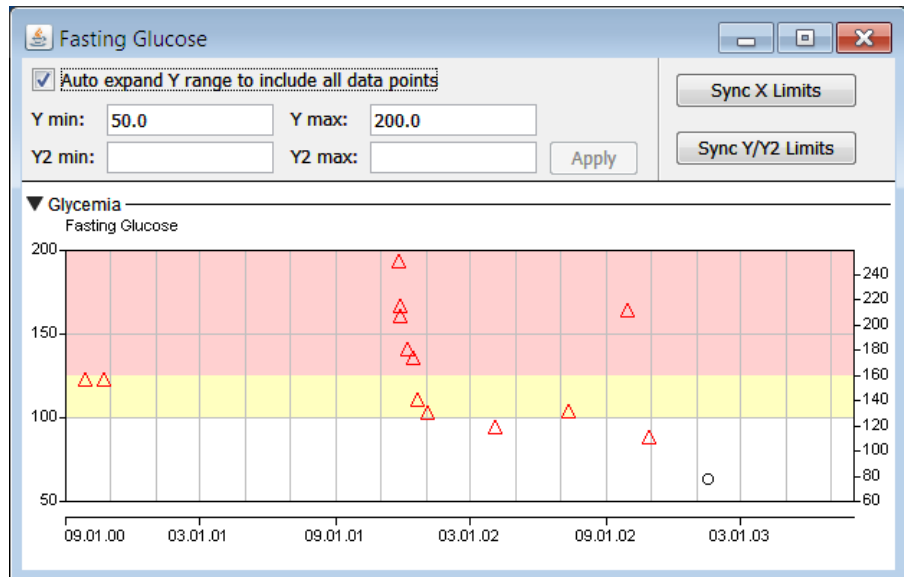
If you select this menu item when the mouse is positioned over a timeline, you can select among three tabs:

- **Data points** – DataMontage displays only data points contained within the timeline.
- **Intervals**– DataMontage displays only intervals contained within the timeline.
- **Data points and intervals** - DataMontage displays both data points and intervals.

X value	Symbol ID	Label	Rollover	Application...
11.29.01 00...	medication	qty=60		
12.22.01 00...	medication	qty=60		
01.09.02 00...	medication	qty=60		
02.03.02 00...	medication	qty=60		
02.27.02 00...	medication	qty=60		
03.22.02 00...	medication	qty=60		
04.03.02 00...	medication	qty=60		
04.27.02 00...	medication	qty=60		
05.20.02 00...	medication	qty=60		

### 5.7 Show XY Graph in Popup

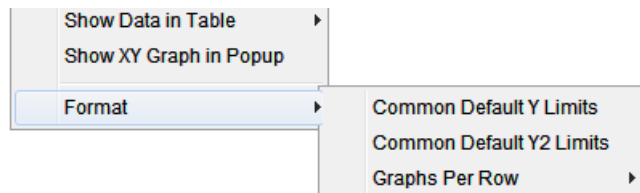
Select this context menu item to display the current graph in a larger, resizable popup window. The popup window prompts you for optional minimum and maximum Y and Y2 axis limits for the graph. The checkbox labelled “Auto expand Y range to include all data points” lets you control whether DataMontage automatically increases the maximum Y value or decreases the minimum Y value so that all data points are visible within the graph. Press the button labelled *Sync X Limits* to set the X axis zoom limits of the main window to those of the popup window. Press *Sync Y/Y2 Limits* to set the Y/Y2 axis limits of the original graph to those in the popup graph.



Press the button labelled *Sync X Limits* to set the X axis zoom limits of the main window to those of the popup window. Press *Sync Y/Y2 Limits* to set the Y/Y2 axis limits of the original graph to those in the popup graph.

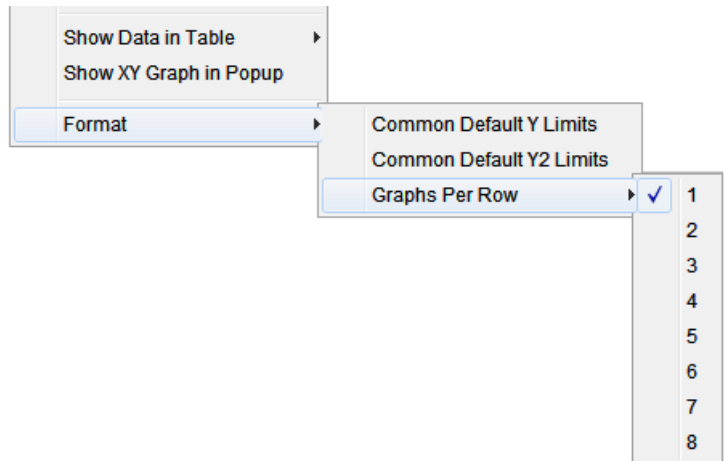
### 5.8 Common Default Y/Y2 Limits

Position your mouse over a module and select one of these menu items from the *Format* context menu to use (or not use) common default Y or Y2 axis limits in all graphs in the module.



## 5.9 Graphs Per Row

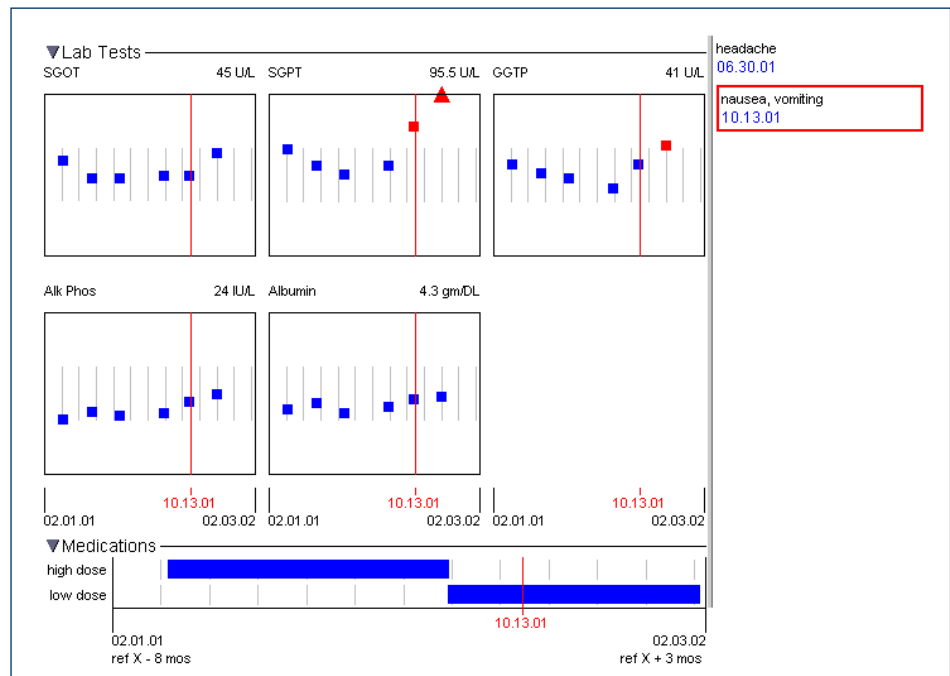
Position your mouse over a module and select this menu item from the *Format* context menu to change the number of graphs displayed per row. If the module contains any timelines, the number of graphs per row is fixed at one.



## 6 Time-Stamped Notes

A DataMontage container can show short, text notes. When you click on the display of a note, a time or x value reference line is displayed in all graphs in the container at the x value or datetime associated with the note, as shown below.

A Note object can be configured with a JavaScript expression so that when you click on a Note in the user interface, DataMontage evaluates the expression to perform an action such as highlighting or filtering parts of the DataMontage container.



This feature enables you to select among pre-defined views of the data in the graph container.

To detach the Notes panel from the graph container, right-click over the Notes panel and select *Detach* from the context menu. The Notes panel will be displayed in a floating window. To re-attach the Notes panel, right-click and select *Attach*.