

1. Web Client Help	2
1.1 1. Quick Start	4
1.2 2. Webclient Layout	7
1.3 3. Query Tool	9
1.4 4. Navigate Terms	20
1.5 5. Query Status	26
1.6 6. Previous Queries	28
1.7 7. Workplace	43
1.8 8. Other Operations	56

Web Client Help

For i2b2 Webclient version 1.7.12

Updated August 27, 2019

- 1. Quick Start
 - 1.1 Basic Query
 - *[Example]*
 - 1.2 Adding an AND term
 - *[How to]*
 - *[Example]*
 - 1.3 Adding an OR term
 - *[How to]*
 - *[Example]*
- 2. Webclient Layout
 - *Top Right.*
 - *Top Left.*
 - *Bottom Right.*
 - *Bottom Left.*
 - *Middle Left.*
- 3. Query Tool
 - 3.1 Layout
 - 3.2 Creating a Query
 - 3.2.1 i2b2 Items for Querying
 - 3.2.1 Operators and Order of Precedence
 - 3.2.2 Constraints
 - *Click on 'Occurs>0x'*
 - 3.2.3 Query Timing
 - *Independent*
 - *Same Financial Encounter*
 - *Temporal Query*
 - 3.2.4 Reloading a Previous Query
 - 3.2.5 Resetting the Query Tool
 - 3.3 Running a Query
 - 3.3.1 Run Query
 - 3.3.2 Query Result Options
 - 1) *Number of Patients*
 - 2) *Patient/Encounter Set*
 - 4) *Patient Breakdowns*
 - 3.3.3. Query Status
 - *When a query is running, the query status panel will show its status.*
- 4. Navigate Terms
 - *Navigate Terms Tab*
 - *Find Tab*
 - *A. The Search By Names tab is used to find all query items containing particular text.*
 - *B. The Search by Codes tab is used to find coded variables.*
 - *Options for Finding Terms*
- 5. Query Status
 - *Show Query Status*
 - *Graph Results*
 - *Query Report*
- 6. Previous Queries
 - 6.1 *'Previous Queries' tab*
 - 6.2 *Find tab*
 - 6.3 *Layout of a Previous Query Display*
 - 6.3.1 *Previous Query Name*
 - 6.3.2 *Results Folder*
 - 6.3.2.1.1 *Patient Set*
 - 6.3.2.1.2 *Encounter Set*
 - 6.3.2.1.3 *Number of Patients*
 - 6.3.2.1.4 *Breakdown*
 - 6.4 *Navigation*
 - 6.4.1 *Menu*
 - 6.4.1.1 *Display*
 - 6.4.1.2 *Rename a Previous Query*
 - 6.4.1.3 *Delete / Remove a Previous Query*
 - 6.4.1.4 *Refresh the List*
 - 6.4.2 *Options*
 - 6.4.2.1 *Maximum to Display*
 - 6.4.2.1.1 *Queries to Display*
 - 6.4.2.2 *Sort Queries*
 - 6.4.2.2.1 *Sort by Name*
 - 6.4.2.2.2 *Sort by Create Date*
 - 6.4.2.3 *Auto Refresh*
 - 6.5 *Using a Previous Query*
 - 6.5.1 *Draggable Items*
 - 6.5.1.1 *Previous Query*

- 6.5.1.2 Patient Set
 - 6.5.1.3 Encounter Set
 - 6.5.2 Add to 'Query Tool'
 - 6.5.2.1 Add Previous Query to 'Query Tool'
 - 6.5.2.1.1 Add Previous Query to the Query Name (New Query)
 - 6.5.2.1.2 Add Previous Query to the Query Name (Query-in-Query)
 - 6.5.2.2 Add Patient Set to the 'Query Tool'
 - 6.5.2.3 Add Encounter Set to the 'Query Tool'
 - 6.5.3 Add to 'Workplace' panel
 - 6.5.3.1 Add Previous Query to 'Workplace' Panel
 - 6.5.3.2 Add Patient Set to 'Workplace' panel
 - 6.5.3.3 Add Encounter Set to 'Workplace' panel
- 7. Workplace
 - 7.1 Layout of the 'Workplace' panel_GoBack
 - 7.1.1 Containers
 - 7.1.2 Folders
 - 7.1.3 Leaves (Items)
 - 7.2 Adding a folder and items
 - 7.2.1 Folders and Items Draggable to Workplace
 - 7.2.2 Adding a Folder
 - 7.2.3 Adding Items
 - 7.2.3.1 Adding Concept, Concept Folder, Modifier, and Modifier Folder
 - Adding from 'Find Terms' tab
 - Adding from 'Navigate Terms' tab
 - 7.2.3.2 Adding Previous Query, Patient Set, and Encounter Set
 - 'Previous Queries' Panel
 - Adding Previous Query from 'Previous Queries' Panel
 - Adding Patient Set or Encounter Set from 'Previous Queries' Panel
 - 7.3 Navigation
 - 7.3.1 Folders
 - 7.3.1.1 Expand / Collapse a Folder
 - 7.3.1.2 Rename a Folder
 - 7.3.1.3 Annotate a Folder
 - 7.3.1.4 Delete a Folder
 - 7.3.2 Items
 - 7.3.2.1 Rename Items
 - 7.3.2.2 Annotate Items
 - 7.3.2.3 Delete Items
 - 7.4 Using Items in 'Workplace' Panel
 - 7.4.1 Items Draggable from Workplace
 - 7.4.2 Using Folders, Concepts, Modifier Folders, Modifiers, Patient Set, and Encounter Set
 - Adding to 'Query Tool' Panel
 - 7.4.3 Using Previous Query
 - Adding Previous Query to Query Name in 'Query Tool' Panel (New Query)
 - Adding Previous Query to Group in 'Query Tool' Panel (Query-in-Query)
- 8. Other Operations
 - Message Log
- 9. Example Queries
 - 3.4 Example Queries (in progress)
 - i. Simple Query: "Finding patients with a diagnosis A or a diagnosis B or has lab test C."
 - ii. Running a Previous Query
 - iii. Temporal Query (Simple)
 - iv. How to find Patients with >1 diagnosis X OR >1 diagnosis Y (Using nested queries)
- 10. Glossary

1. Quick Start

1.1 Basic Query

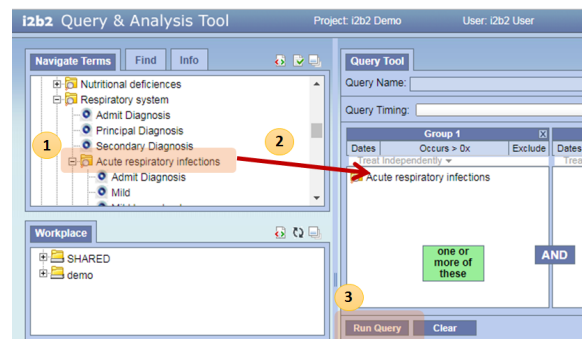
Basic queries are constructed by dragging and dropping terms from the 'Navigate Terms' panel into a 'Query Tool' group panel. **[How to]**

1. Find a term
 - a. Go to 'Navigate Terms' tab
 - b. Click folders to expand the lists of terms
 - c. Select a term
2. Drag and drop to 'Group 1'
 - a. Drag the selected term into 'Query Tool > Group 1'
3. Run Query
 - a. Click 'Query Tool > Run Query' 'OK'
4. Get Result
 - a. Query running status will be displayed in 'Show Query Status' tab, which is located below 'Query Tool'
 - b. Query result will be displayed in 'Graph Results'
 - i. Number of patients
 - ii. Query name
 - c. The query and its result will be stored and displayed in 'Previous Queries' panel

[Example]

Find all patients who have
at least one diagnosis of *Acute respiratory infections*.

1. Find *Acute respiratory infections*
 - a. Go to 'Navigate Terms' panel
 - b. Select *Diagnosis Respiratory system Acute respiratory infections*
2. Drag and drop
 - a. Drag the *Acute respiratory infections* term into 'Query Tool > Group 1'
3. Run Query
 - a. Click 'Query Tool > Run Query' 'OK'
4. Get Results
 - a. See the 'Graph Results' tab for the query result
 - b. The query is now stored in the 'Previous Queries' panel



1.2 Adding an AND term

Terms in different groups have a logical **AND** relationship. When terms are combined with the **AND** operator, retrieved records must contain all the terms.

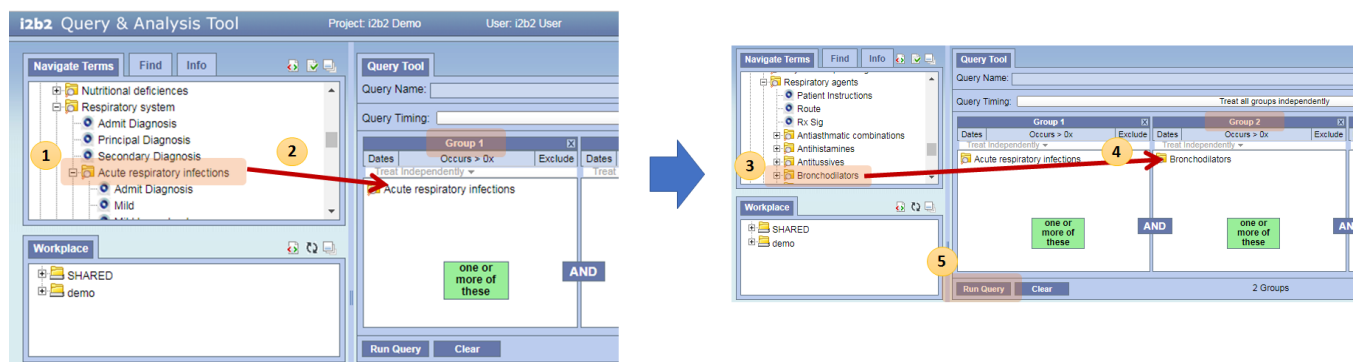
[How to]

1. Find a Term
 - a. Go to 'Navigate Terms' tab
 - b. Click term folders to narrow down the concept
 - c. Select a term
2. Drag and drop to 'Group 1'
 - a. Drag the selected term into 'Query Tool > Group 1'
3. Find another Term
4. Drag and drop to 'Group 2'
 - a. Drag the selected term into 'Query Tool > Group 2'
5. Run Query
 - a. Click 'Query Tool > Run Query' 'OK'
6. Get Result
 - a. See the 'Graph Results' tab for the query result
 - b. The query is now stored in the 'Previous Queries' panel

[Example]

Find all patients who have
at least one diagnosis of *Acute respiratory infections*
AND
at least one prescription of *Bronchodilators*.

1. Find *Acute respiratory infections*
 - a. Go to 'Navigate Terms' panel
 - b. Select *Diagnosis Respiratory system Acute respiratory infections*
2. Drag and drop
 - a. Drag the *Acute respiratory infections* term into 'Query Tool > Group 1'
3. Find *Bronchodilators*
 - a. Go to 'Navigate Terms' panel
 - b. Select *Medications Respiratory agents Bronchodilators*
4. Drag and drop
 - a. Drag the *Acute respiratory infections* term into 'Query Tool > Group 2'
5. Run Query
 - a. Click 'Query Tool > Run Query' 'OK'
6. Get Results
 - a. See the 'Graph Results' tab for the query result
 - b. The query is now stored in the 'Previous Queries' panel



1.3 Adding an OR term

Terms in the same group have a logical **OR** relationship. When terms are combined with the **OR** operator, retrieved records will contain either or both terms.

[How to]

1. Find a Term
 - a. Go to 'Navigate Terms' panel
 - b. Click term folders to narrow down the concept
 - c. Select a term
2. Drag and drop to 'Group 1'
 - a. Drag the selected term into 'Query Tool > Group 1'
3. Find another Term
4. Drag and drop to 'Group 1'
 - a. Drag the selected term into 'Query Tool > Group 1', again.
5. Run Query
 - a. Click 'Query Tool > Run Query' 'OK'
6. Get Result
 - a. See the 'Graph Results' tab for the query result
 - b. The query is now stored in the 'Previous Queries' panel

[Example]

Find all patients who have

at least one diagnosis of *Acute respiratory infections* OR at least one diagnosis of *Asthma*

AND

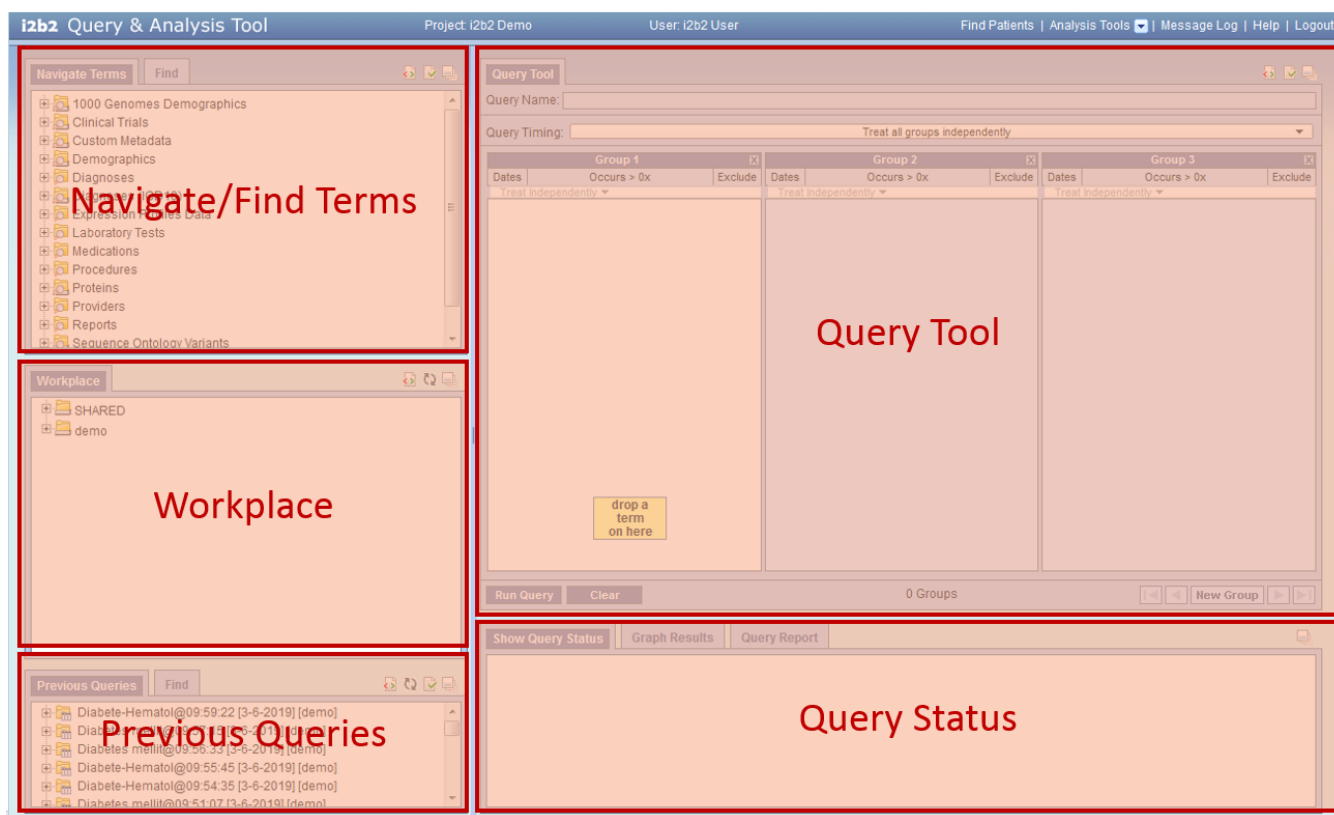
at least one prescription of *Bronchodilators*.

1. Find *Acute respiratory infections*
 - a. Go to 'Navigate Terms' panel
 - b. Select *Diagnosis Respiratory system Acute respiratory infections*
2. Drag and drop
 - a. Drag the *Acute respiratory infections* term into 'Query Tool > Group 1'
3. Find *Asthma*
 - a. Go to 'Navigate Terms' panel
 - b. Select *Diagnosis Respiratory system Chronic obstructive diseases Asthma*
4. Drag and drop
 - a. Drag the *Acute respiratory infections* term into 'Query Tool > Group 1', again
5. Find *Bronchodilators*
 - a. Go to 'Navigate Terms' panel
 - b. Select *Medications Respiratory agents Bronchodilators*
6. Drag and drop
 - a. Drag the *Acute respiratory infections* term into 'Query Tool > Group 2'
7. Run Query
 - a. Click 'Query Tool > Run Query' 'OK'
8. Get Results
 - a. See the 'Graph Results' tab for the query result
 - b. The query is now stored in the 'Previous Queries' panel

The screenshot shows the 'Query Tool' interface. At the top, there is a 'Query Name' field and a 'Query Timing' dropdown set to 'Treat all groups independently'. Below this, there are two panels, 'Group 1' and 'Group 2'. Each panel has a 'Dates' dropdown, an 'Occurs > 0x' dropdown, and an 'Exclude' checkbox. In 'Group 1', the terms 'Acute respiratory infections' and 'Asthma' are listed. In 'Group 2', the term 'Bronchodilators' is listed. Between the two groups, there is a blue box with the word 'AND'. Below each group's list of terms, there is a green box with the text 'one or more of these'. At the bottom of the interface, there are 'Run Query' and 'Clear' buttons, and a status bar indicating '2 Groups'.

2. Webclient Layout

The i2b2 Webclient has five main panels, laid out in the following manner.



Top Right. [Query Tool](#)

The **Query Tool** panel is where queries are constructed and run. Users can specify query criteria in the group panels. Query criteria can be any terms contained in the vocabularies (also called ontologies) in the **Navigate/Find Terms** section, as well as past queries or query results.

Top Left. [Navigate/Find Terms](#)

The **Navigate/Find Terms** panel contains hierarchical vocabularies of terms for constructing queries. Users can navigate through the vocabularies using the **Navigate Terms** panel, or can search by text or codes using the **Find** tab.

Bottom Right. [Query Status](#)

The **Query Status** panel shows information about the state of a query, such as if it is currently running, or, when it completes, the results. The **Query Report** tab provides a textual representation of the query, while **Graph Results** displays various graphical representations of the results.

Bottom Left. [Previous Queries](#)

Previously-run queries and their results are stored in the **Previous Queries** panel. Users may re-use them by dragging them into the Query Name section or groups in the **Query Tool** or save them by dragging them into the **Workplace** panel. The most recently run queries are displayed at the top. Users can use the **Find** tab to search for a prior query they created.

Middle Left. [Workplace](#)

The **Workplace** panel stores information, such as prior queries, that can be referred to or used later. Users may store previously-run queries, patient sets, individual patients, and terms in this panel. Users can create folders to organize the workplace. The workplace is private by default, but there is a SHARED folder that everyone has access to. Users can use the SHARED folder to share terms and queries with other colleagues.

New in v1.7.12



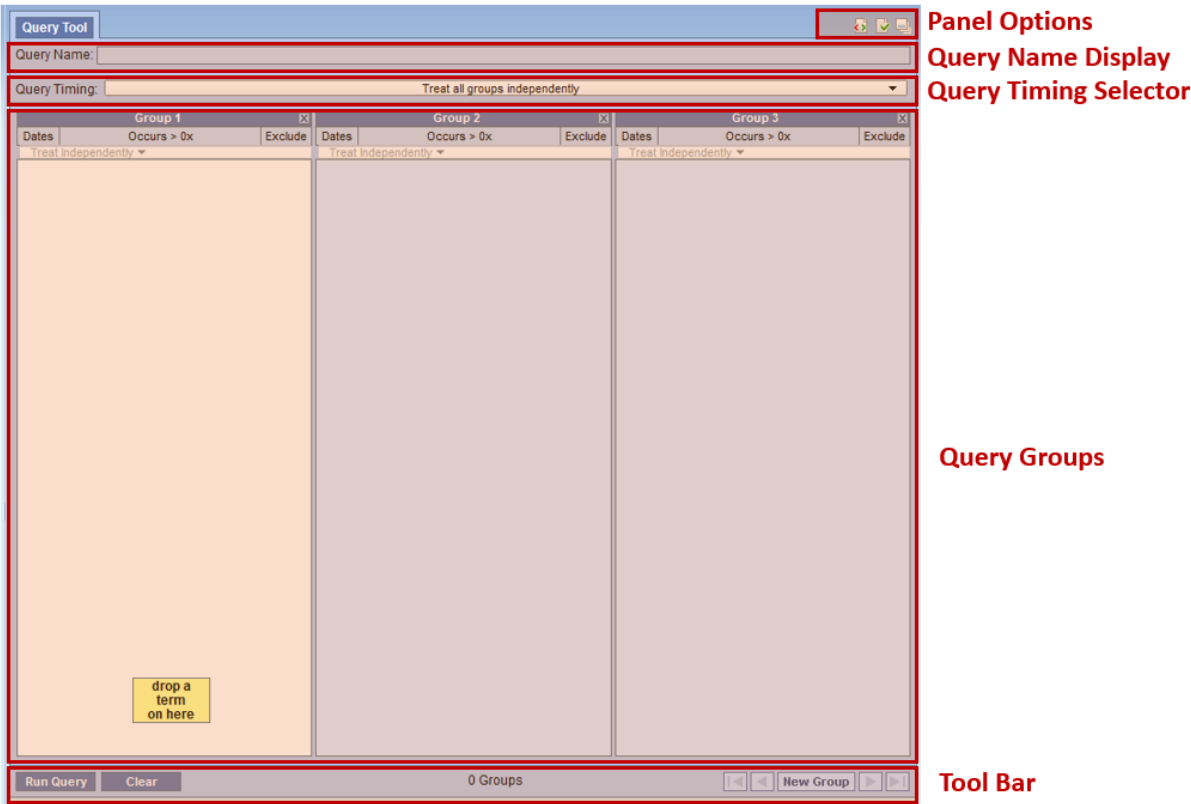
By default, the three panels on the left are combined into one large panel with tabs across the top. This provides a larger workspace. The original view can be restored by clicking on the Zoom icon in the upper right (). It is also possible for an administrator to change the default for all users via the [i2b2_config_data.js](#) file.


3. Query Tool

The **Query Tool** panel is where queries are constructed and run.

- 3.1 Layout
- 3.2 Creating a Query
 - 3.2.1 i2b2 Items for Querying
 - 3.2.1 Operators and Order of Precedence
 - 3.2.2 Constraints
 - 3.2.3 Query Timing
 - Independent
 - Same Financial Encounter
 - Temporal Query
 - 3.2.4 Reloading a Previous Query
 - 3.2.5 Resetting the Query Tool
- 3.3 Running a Query
 - 3.3.1 Run Query
 - 3.3.2 Query Result Options
 - 1) Number of Patients
 - 2) Patient/Encounter Set
 - 4) Patient Breakdowns
 - 3.3.3. Query Status
 - When a query is running, the query status panel will show its status.

3.1 Layout



- Panel Options**  allow users to (1) view the XML exchange between the client and the i2b2 server (if enabled) , (2) set options for the panel, and (3) resize the panel.
- Query Name Display** shows the name of the current query. Users can also drop a previous query here to load it.
- Query Timing Selector** enables users to select the appropriate timings for their query, including temporal queries.
- Query Groups** are where users can drag and drop terms to build queries. There are initially three Groups, but more can be added.
- Tool Bar** contains buttons to run queries, clear all the panels, add new panels, and navigate between panels.

3.2 Creating a Query

3.2.1 i2b2 Items for Querying

These items may be dragged into Query Groups to construct queries.

Icons	Names	Description
	Terms	Terms (also called concepts) are the words or phrases that make up vocabularies. Terms are the basic query items.
	Term Groups	Related terms are grouped into hierarchies. When a term group is used in a query, all terms in the group are searched for.
	Modifiers	Modifiers are descriptors that can be attached to terms to make small changes to them. For example, a Diagnosis concept may be additionally described by Modifiers "Principal Diagnosis" or "Secondary diagnosis."
	Modifier Groups	Groups of Modifiers, similar to Term Groups.
	Previous Queries	Previous Queries are queries that have been run before and are stored in the 'Previous Queries' panel.
	Individual Patients	If selected when running a query, a query can return a Patient Set, which is a set of patient numbers that satisfy the query criteria. The Patient Set is stored with the query in the Previous Queries panel. The Patient Set can be expanded, and individual subjects dragged into query groups to be used in a new query.
	Patient Sets	If selected when running a query, a query can return a Patient Set, which is a set of patient numbers that satisfy the query criteria. The Patient Set is stored with the query in the Previous Queries panel and can be dragged into query groups to be used in a new query.
	Encounter Sets	If selected when running a query, a query can return an Encounter Set, which is a set of encounter numbers that satisfy the query criteria. The Encounter Set is stored with the query in the Previous Queries panel and can be dragged into query groups to be used in a new query.

3.2.1 Operators and Order of Precedence

i2b2 items are combined using Boolean operators **AND** and **OR**.

Items within each Group are first **OR**ed together. The Groups are then **AND**ed together.

Example 1 (AND): This query finds patients with *Acute Myocardial Infarction* AND *Angina Pectoris*.

The screenshot shows the 'Query Tool' interface. At the top, there's a 'Query Name' field and a 'Query Timing' dropdown menu set to 'Treat all groups independently'. Below this, there are three query groups: Group 1, Group 2, and Group 3. Each group has a header with 'Dates', 'Occurs > 0x', and 'Exclude' options, and a 'Treat Independently' dropdown. Group 1 contains the term 'Acute myocardial infarction' with a green box below it saying 'one or more of these'. Group 2 contains the term 'Angina pectoris' with a similar green box. Group 3 is empty and has a yellow box saying 'drop a term on here'. The groups are connected by 'AND' operators. At the bottom, there are buttons for 'Run Query', 'Clear', and 'New Group', along with a status bar showing '2 Groups'.

Example 2 (OR): This query finds patients with *Acute Myocardial Infarction* OR *Angina Pectoris*.

Query Tool

Query Name:

Query Timing:

Group 1	Group 2	Group 3
<div> <div>Dates</div> <div>Occurs > 0x</div> <div>Exclude</div> </div> <div>Treat Independently</div> <div> <div>Acute myocardial infarction</div> <div>Angina pectoris</div> </div> <div>one or more of these</div>	<div> <div>Dates</div> <div>Occurs > 0x</div> <div>Exclude</div> </div> <div>Treat Independently</div> <div></div> <div>drop a term on here</div>	<div> <div>Dates</div> <div>Occurs > 0x</div> <div>Exclude</div> </div> <div>Treat Independently</div> <div></div>

1 Group

Example 3 (AND of ORs): This query finds patients with (*Acute Myocardial Infarction OR Angina Pectoris*) AND who are *male*.

*Note that the OR expression in the parentheses is evaluated first.

Query Tool

Query Name:

Query Timing:

Group 1	Group 2	Group 3
<div> <div>Dates</div> <div>Occurs > 0x</div> <div>Exclude</div> </div> <div>Treat Independently</div> <div> <div>Acute myocardial infarction</div> <div>Angina pectoris</div> </div> <div>one or more of these</div>	<div> <div>Dates</div> <div>Occurs > 0x</div> <div>Exclude</div> </div> <div>Treat Independently</div> <div>Male</div> <div>one or more of these</div>	<div> <div>Dates</div> <div>Occurs > 0x</div> <div>Exclude</div> </div> <div>Treat Independently</div> <div></div> <div>drop a term on here</div>

2 Groups

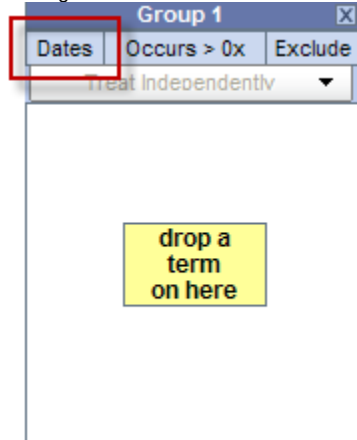
3.2.2 Constraints

Constraints are used to narrow down the search criteria to a particular time frame, number of occurrences or a specific value or range of values. In i2b2, there are several types of constraints that can be defined in the Query Tool view.

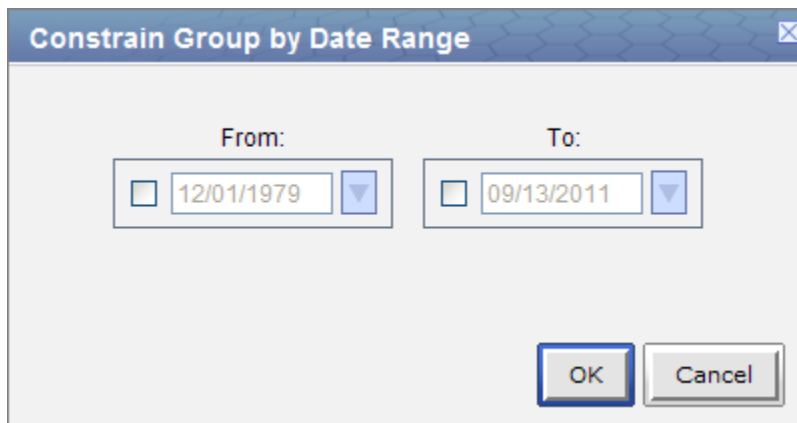
1. Group Constraints

a. Date Constraint

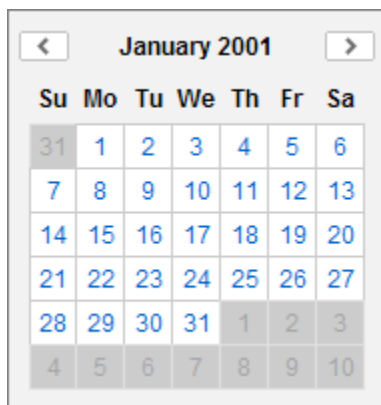
i. Setting Date Constraint for the entire Group



Clicking on 'Dates' will display a dialog box in which a date range can be selected to restrict the occurrences of the items in the Group to within that range. Check one or both of the check boxes to indicate whether there is a begin date (From) or an end date (To) or both.

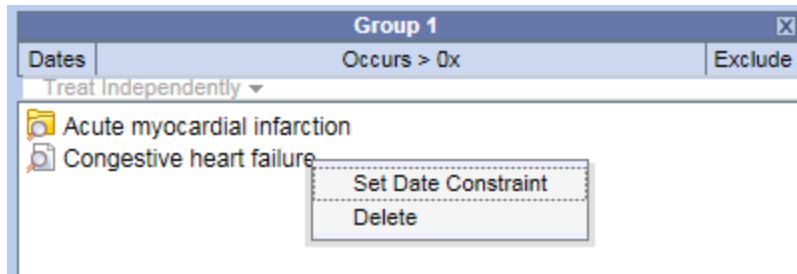


Then type the date directly in the text box or click on the drop-down arrow to open the calendar below to select a date. This will set the date range for all items in this Group.

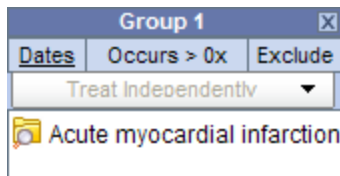


ii. Setting Date Constraint on individual items.

Sometimes only some items in the Group need date constraints or different items in one group require different date constraints. In this case, right click on an item and select **Set Date Constraint** to set the date constraint for that item specifically.



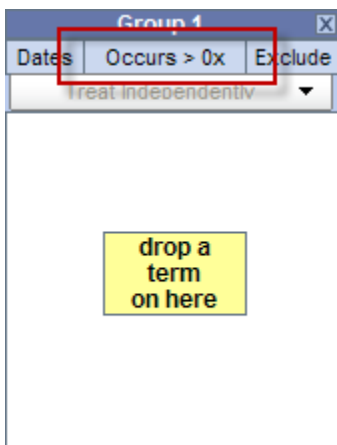
iii. Once a date constraint is applied, **Dates** will now be underlined to indicate a date constraint has been set.



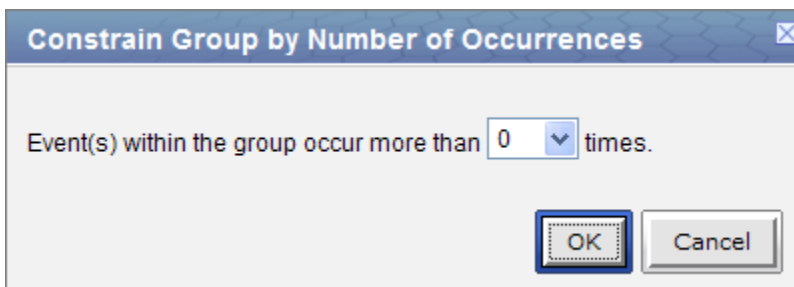
b. **Occurrence Constraint**

Users can define the number of times an item must occur for each subject.

Click on 'Occurs>0x'



A new window will open



Click on the **drop-down arrow** to display a list of numbers.
Select a number from the list.

Constrain Group by Number of Occurrences

Event(s) within the group occur more than times.

OK Cancel

Click on the **OK** button.

Occurs > 0x will now be underlined to indicate a constraint has been set and the 0 will be replaced with the selected number.

Group 1

Dates Occurs > 3x Exclude

Treat Independently ▼

Acute myocardial infarction

c. Exclusion

Constraint will not include patients with the concepts listed in the panel.

Click on the Exclude button located in the selection criteria section of the panel.

The text in the information box will change to "none of these" and the background color will change to pink.

d. Value Constraints (eg. labs)

Constraint is by the value associated to a concept or modifier. Not all items have values. The value constraint window will open automatically when you drop a concept into a panel in the Query Tool view. To set the constraint at a later time, right click on the item in the panel and select Set Value.

Delete

Set Value...

i. Numeric

The numeric value is defined in the source system when the result is entered. Enter a numerical value at the Please enter a value field.

Please enter a value:

Unlike flag and text values, numeric values use operators, such as greater than or less than when setting the constraints.

Please select operator:

LESS THAN (<)

LESS THAN (<)

LESS THAN OR EQUAL TO (<=)

EQUAL (=)

BETWEEN

GREATER THAN (>)

GREATER THAN OR EQUAL (>=)

The Units will default to the normal units defined for the item. Click on the drop-down arrow to change the units.

Units =

mg

mg

gm/liter

mg/ml

gm

gm/15ml

gm/50ml

mcg

mcg/ml

mg/0.5ml

mg/15ml

mg/5ml

(In order for unit conversion to work a parameter called CRC_ENABLE_UNITCD_CONVERSION must be defined for the project. If this is not defined you need to contact your system administrator.)

ii. Categorical

iii. Text

Choose value of CK-MB QUANT (Test:CPK-MB)

Searches by Lab values can be constrained by the high/low flag set by the performing laboratory, or by the values themselves.

☐ No Value

☐ By FLag

☒ By Value

Please select a value:

TEST NOT PERFORMED

NP

BORDERLINE

POSITIVE

OK Cancel

i. Flags (high, low, etc.)

ii. Modifier Value Constraints

Choose value of Medication Frequency (Test:MED:FREQ)

Searches by Modifier values can be constrained by either a flag set by the sourcesystem or by the values themselves.

☐ No Value

☒ By Value

Please select a value:

Before meals

Twice per day

Once per day

Once at night

Three times per day

OK Cancel

3.2.3 Query Timing

Query Timing: Treat all groups independently

Non-Temporal Query: Treat all groups independently

Non-Temporal Query: Selected groups occur in the same financial encounter

Temporal Query: Define sequence of Events

Choose the relationship between the query panels. The default is independent.

1. Independent

- The items (facts) can occur at any time in the patient's history.

Example

Patient has a medication with a dose greater than 500 mg and a medication that is taken once a day documented at any time in their history.

2. Same Financial Encounter

- The items (facts) occur during the same visit (financial encounter).
- When this is selected, individual panels can be included in the "same encounter" query, or they can be treated independently.

Occurs in Same Encounter ▼
Treat Independently
Occurs in Same Encounter

Example

Patient has a diagnosis of Acute MI documented at any time in their history and they have a medication with a dose greater than 500 mg and a medication that is taken once a day documented during the same visit

1. Temporal Query

In this mode, a sequence of events are defined that are anchored by a constraining population. The constraining population is defined exactly like other query types. The process of building a sequence of events is explained by a tutorial that is viewable by clicking 'Turn On Tutorial' in the upper-right corner of the query tool.

Turn On Tutorial

Observation A

Dates	Exclude
Diabetes mellitus	

→

Observation B

Dates	Exclude
Antidiabetic agents	

+

Add a new Observation

Start of first ever Observation A occurs before Start of first ever Observation B

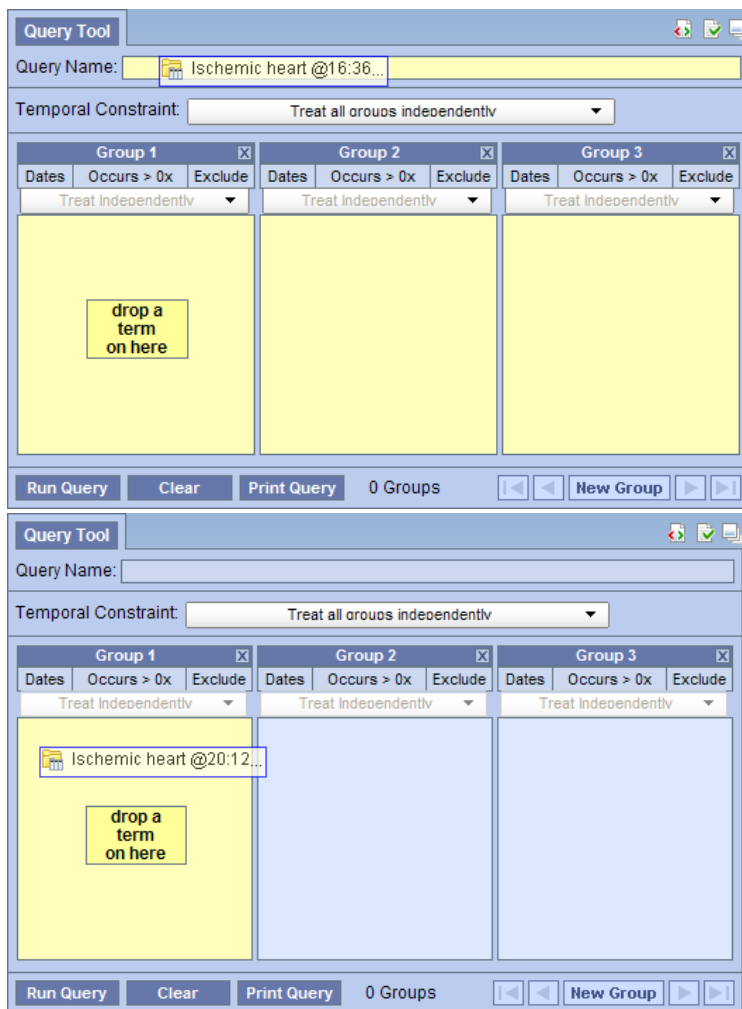
▼ Hide Constraining Population

Group 1			Group 2		
Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude
Treat Independently ▼					
>= 65 years old					

This example finds patients who were diagnosed with diabetes prior to the first observation of an antidiabetic medication (*top panel*). The population is constrained to patients over 64 years of age (*bottom panel*).

3.2.4 Reloading a Previous Query

Saved queries (either from Previous Queries or the Workplace) can be reloaded by dragging them to the Query Name bar at the top of the Query Tool. They can be used within a query by dragging them into a query panel. See the [Previous Query section](#).



Left: reload a previous query. Right: Use a previous query within a new query.

3.2.5 Resetting the Query Tool

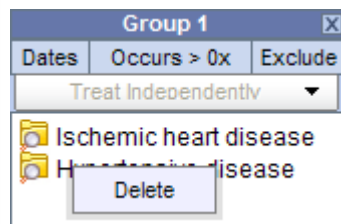
There are three options for resetting the **Query Tool view**. Users can (1) reset all the groups, (2) clear all items in a panel, or (3) delete an individual item from the group.

A. Reset All Groups: Click on the **Clear** button located on the toolbar at the bottom of the *Query Tool view*.



B. Clear Items in a Panel / Group: Click on the **Delete** button (X) located in the top right corner of the panel (next to the Group name)

C. Delete Single Item: Using the *right mouse button*, click on the name of the item to be removed and select **Delete** from the list.



3.3 Running a Query

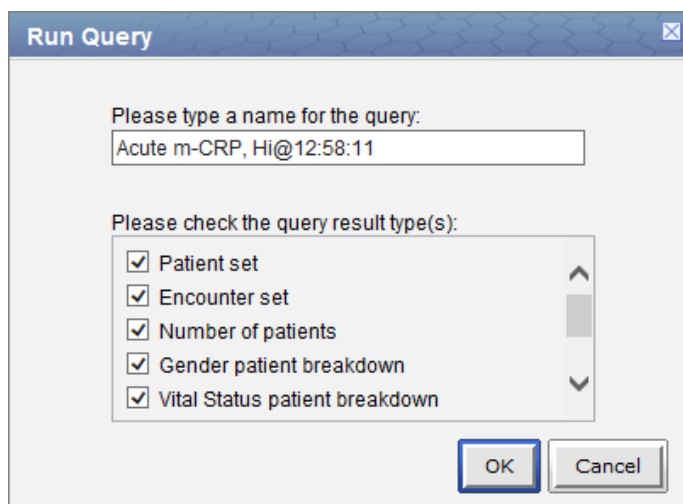
3.3.1 Run Query

Once the query criterion has been defined, the final steps are to click on the Run Query button, select the result type(s), and click on the OK button to run the query.

Once you have defined the search criteria click on the Run Query button located on the toolbar at the bottom of the Query Tool view. A new window will open.

- A name for the query will default at the query name field. Either change the name of the query or accept the default.
- In the query result type section, click on the checkboxes for those result types you want to include when the query is run.
- Click on the OK button.
- The Run Query window will close and the querying process will begin

Once you begin the process of running the query the Query Status view will display "Running Query", the name of the query, and the time that has elapsed.



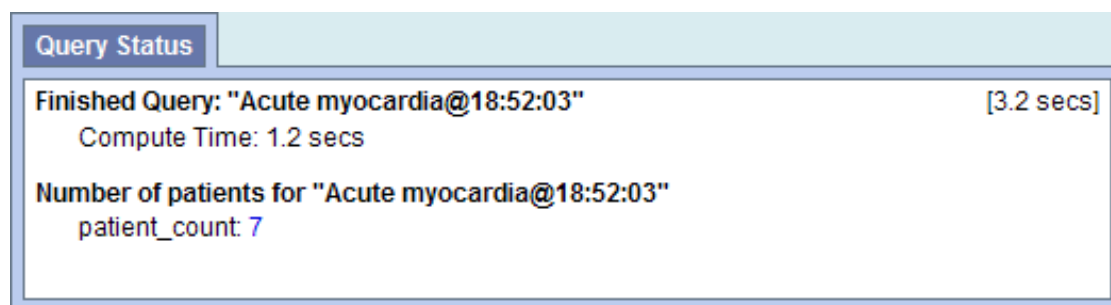
The "Run Query" dialog box has a title bar with a close button. It contains two sections. The first section is labeled "Please type a name for the query:" and has a text input field containing "Acute m-CRP, Hi@12:58:11". The second section is labeled "Please check the query result type(s):" and contains a list of five options, each with a checked checkbox: "Patient set", "Encounter set", "Number of patients", "Gender patient breakdown", and "Vital Status patient breakdown". At the bottom right are "OK" and "Cancel" buttons.

3.3.2 Query Result Options

There are three categories of query type: counts, sets, and breakdowns. (Note that the Timeline type is not used in the Web Client. If selected it will work the same as patient set.)

1) Number of Patients

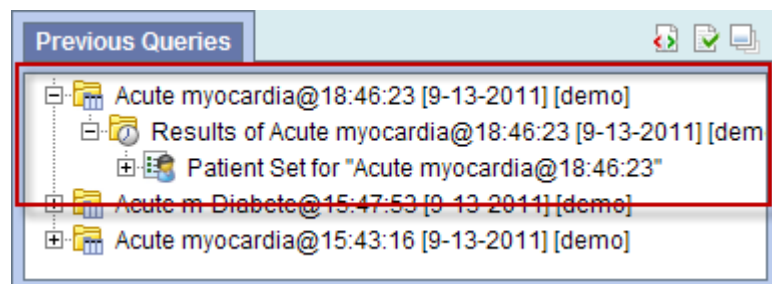
This option will return a total count for those patients who meet the defined criteria. This is the most common and fastest query type.



The "Query Status" view has a title bar. Below the title bar, it displays "Finished Query: 'Acute myocardia@18:52:03'" in bold, with "[3.2 secs]" to its right. Below this, it shows "Compute Time: 1.2 secs". Further down, it displays "Number of patients for 'Acute myocardia@18:52:03'" in bold, with "patient_count: 7" below it.

2) Patient/Encounter Set

These options return a set of patients or encounters that meet the defined criteria. The set is visible in the Previous Query view and can be used in future queries, the workspace, and by plugins.



The "Previous Queries" view has a title bar with icons for refresh, check, and print. Below the title bar, it shows a list of queries. A red box highlights the first three items: "Acute myocardia@18:46:23 [9-13-2011] [demo]", "Results of Acute myocardia@18:46:23 [9-13-2011] [dem", and "Patient Set for 'Acute myocardia@18:46:23'". Below these are "Acute m Diabete@15:47:53 [9-13-2011] [demo]" and "Acute myocardia@15:43:16 [9-13-2011] [demo]".

Only information on the query's completion is shown in the Query Status panel.

Query Status

Finished Query: "Acute myocardia@18:46:23" [3.1 secs]
Compute Time: 1.1 secs
Patient Set for "Acute myocardia@18:46:23"

4) Patient Breakdowns

The following query types will return patient counts stratified by the selected breakdown category (e.g., Gender or Age).

Breakdown type
Gender patient breakdown
Vital Status patient breakdown
Race patient breakdown
Age patient breakdown
Length of Stay breakdown
Top 20 Medications Breakdown
Top 20 diagnoses Breakdown
Inpatient and Outpatient Breakdown

3.3.3. Query Status

When a query is running, the query status panel will show its status.

Status	Meaning
Running	The query is currently running on the server and the client is waiting for results.
Finished	The query has completed. Results will be shown below this message.
Queued	The query took longer than the configured timeout. (Defaults to 180 seconds.) It is still running in the background and the results will appear in Previous Queries when it completes.
Error	An error occurred running the query. More information might be available in the XML Message Log.

4. Navigate Terms

The Navigate Terms Panel is used to find terms for constructing queries.

Navigate Terms Tab
Find Tab

- A. The Search By Names tab is used to find all query items containing particular text .
 - B. The Search by Codes tab is used to find coded variables.
- Options for Finding Terms

Terms, (also called concepts), make up vocabularies (or ontologies) in i2b2 and are the building blocks of i2b2 queries. The Navigate Terms Panel is used to find terms for constructing queries. It has two tabs, the **Navigate Terms** tab and the **Find** tab.

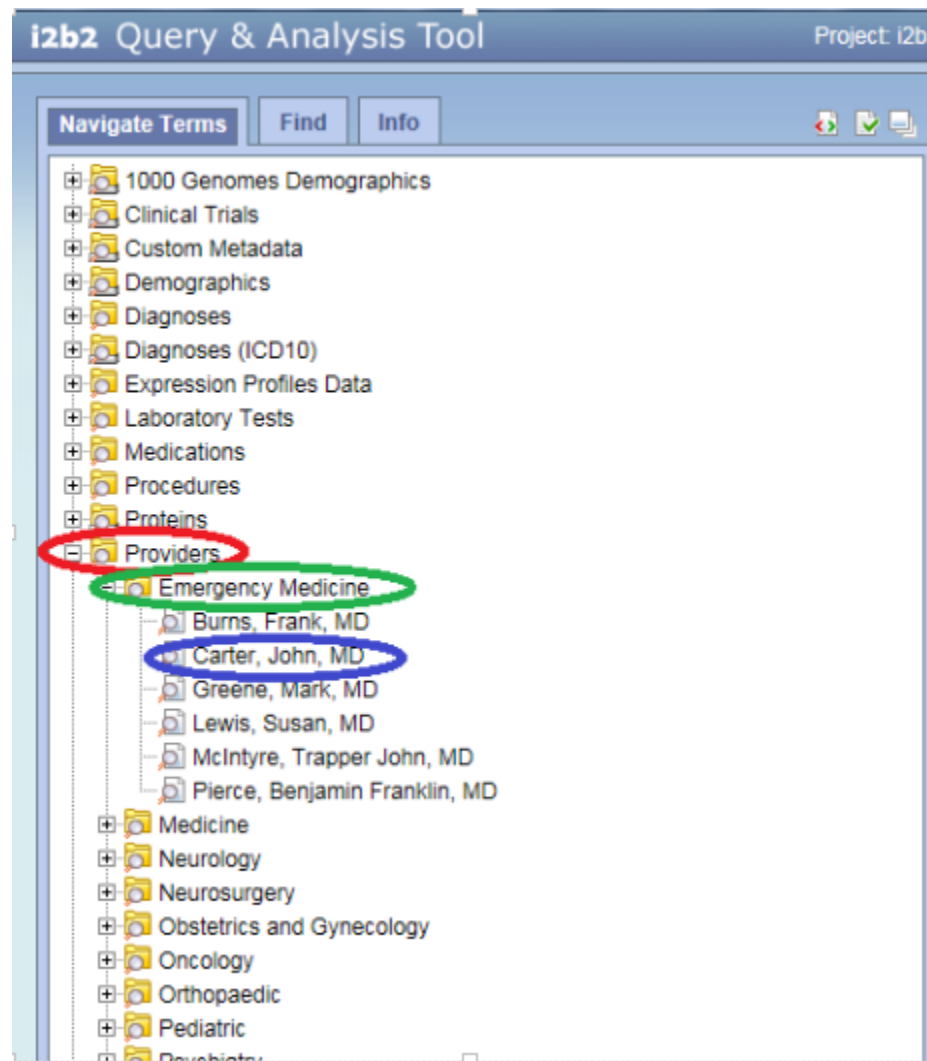
The **Navigate Terms** tab is used to drill into a hierarchy of terms and find terms of interest to query.

The **Find** tab is used to search for terms or codes to be used in queries.

Navigate Terms Tab

The **Navigate Terms** tab is used to find ontology items to be used in a query. This panel displays the i2b2 query terms or concepts. Terms are grouped with similar items and displayed in a hierarchical tree structure that can be expanded to view all items in the category.

Folders are expanded by clicking on the '+' sign. The '+' changes to a '-' and the next level of detail is displayed. The hierarchical structure consists of **containers**, **folders** and **leaves**.





Containers are the highest level of the hierarchy. They can be expanded by clicking on the *plus sign* (+) or collapsed by clicking on the *minus sign* (-). Containers cannot be dragged to other panels.



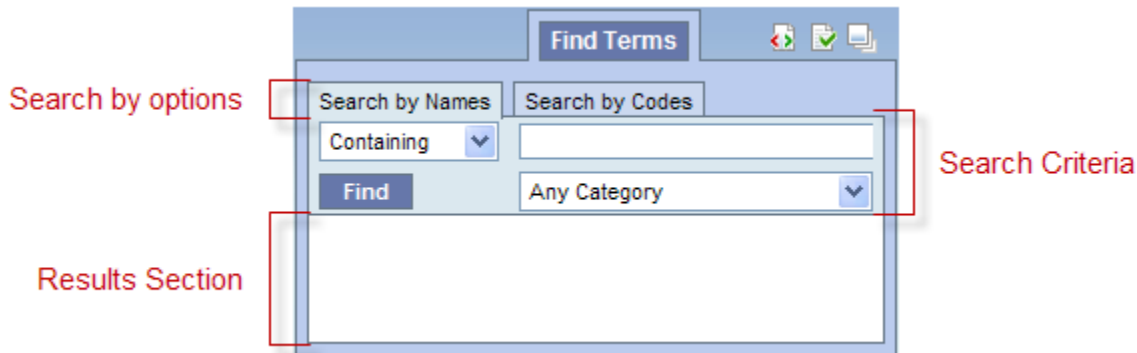
Folders Like containers, folders can be expanded using the + and collapsed using the -. Unlike containers, folders can be dragged to other panels. When a folder is dragged into a query group, the resulting query will return results for everything in the folder.



Leaves are the lowest level of the hierarchy. They cannot be expanded or collapsed. They can be dragged into query groups as query criteria.

Find Tab

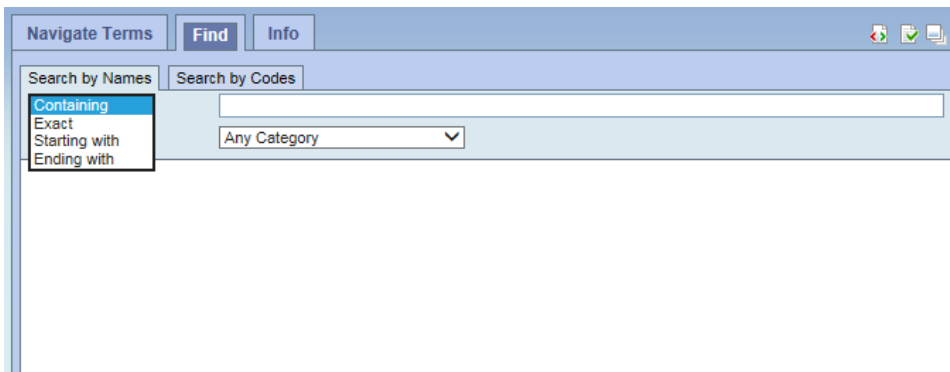
The **Find** tab provides a way to search for a query items. Query terms can be located using the Find Tab by selecting either 'Search by Names' or 'Search by Code' options.



A. The **Search By Names** tab is used to find all query items containing particular text .

1. Select the search qualifier from the left drop-down menu.

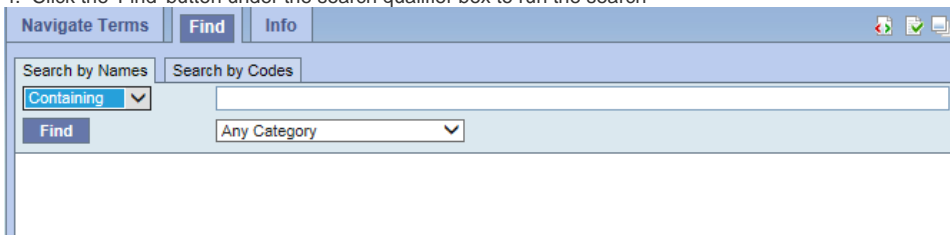
- **Containing:** The results returned will be those terms whose name or code CONTAINS the text entered in the search box. This is the default option.
- **Exact:** The results returned will be those terms whose name or code matches exactly to the text entered in the search box.
- **Starting with:** The results returned will contain only those terms whose name or code begins with the text entered in the search box.
- **Ending with:** The results returned will contain only those terms whose name or code ends with the text entered in the search box.



2. Type in a text string in the empty box.

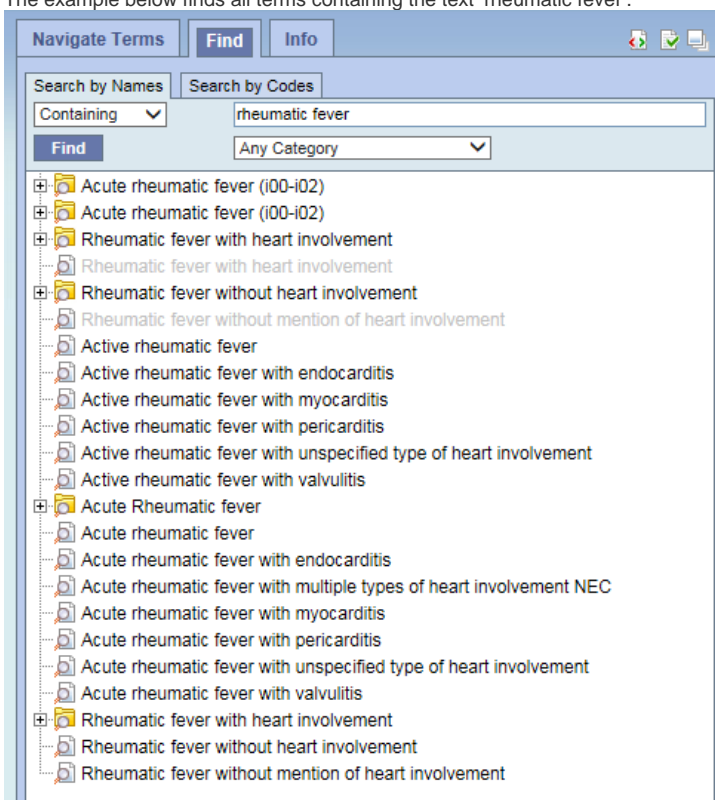
3. Choose a category from the drop-down menu or leave it as the default= Any Category, which will search all categories.

4. Click the 'Find' button under the search qualifier box to run the search



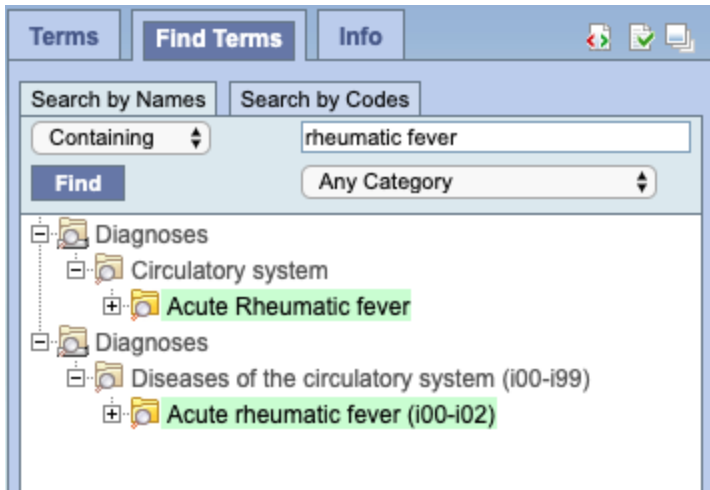
5. Select any terms returned by the search and drag them into a query group to use as query criteria

The example below finds all terms containing the text 'rheumatic fever'.



New in v1.7.12

The Find Terms view has changed. The same query now shows many fewer results and it shows their placement in the hierarchy. Search results are highlighted in green, and parent results can also be dragged into other panels. Results which are hierarchically within another result are omitted to save space (e.g., many of the results in the graphic above are within the Acute Rheumatic fever folder). Both of these new features can be turned off via the Find Terms options.

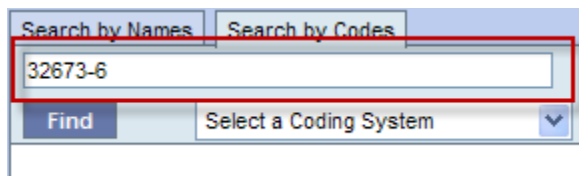


B. The **Search by Codes** tab is used to find coded variables.

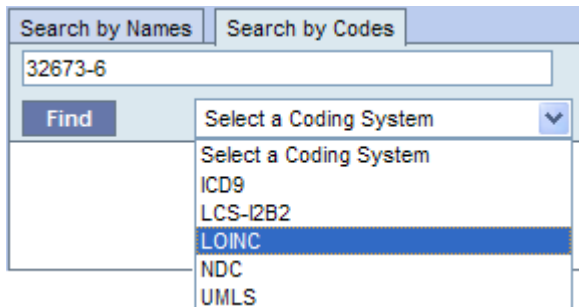
To use this option, a code must be entered and a coding system selected.

Example: Find LOINC code 32673-6

1. Enter the code in the search box




2. Click on the **drop-down arrow** located in the 'Select a Coding System' box and select **LOINC** from the drop down list.



3. Click on the **Find button**.
4. The results will be displayed in the results section.

Options for Finding Terms

Clicking on the **Show Options** button  in the upper right hand corner of the Navigate Terms panel opens this popup box that provides additional options for finding terms.

Maximum Number of Children to Display

The default value for **Maximum number of children to display** for a search of terms or codes is usually 200. However, this number can be changed to retrieve either more or fewer results. When a search is run, once the maximum number of terms is reached a message will appear to say that the query has reached the maximum number of terms and suggest searching again with a more specific query. Running a search with a more specific query will narrow results as the selection criteria will not be as broadly defined.

Show Hidden Terms

In the metadata table, an attribute is set to determine whether or not a term is active, inactive or hidden. If an item is marked as hidden it will not appear in the list of terms. Selecting **Show Hidden Terms** will display those items marked to be hidden. For easy identification, hidden terms will be red when displayed in the results list.

Show Synonymous Terms

Some terms may be flagged in the metadata table as a synonym of another term. Selecting **Show Synonymous Terms** will display both the original term and the synonym in the *Find Terms view*. For easy identification, synonymous terms will be blue when displayed in the results list.

Show Hierarchy in Results

New in v1.7.12, the parent folders are shown in the search results. This can be disabled by checking this box. If Find Terms queries are extremely slow, this will increase performance.

Show Individual Items in Folders

New in v1.7.12, by default search results that are contained inside another search result are omitted, to save time and space. Checking this box restores the earlier behavior of showing all results. Be aware that this dramatically increases the number of results returned.

Enable Patient Counts

The **Enable patient counts** option will display the total number of patients that have a fact entered for that item.

Use Short Tooltips

In the i2b2 webclient, a tooltip displays when the cursor hovers over an item. By default, the tooltip that displays contains the entire path name and the tooltip that is specific to that item. Enabling the **Use short tooltips** option will only display the tooltip information; the path will not be included.

Show Concept Codes in Tooltips

In addition to showing the tooltip, this option will also display the concept code associated with the item.

Disable Modifiers

The ability to search for modifiers will not be available if the **Disable modifiers** option is checked off.

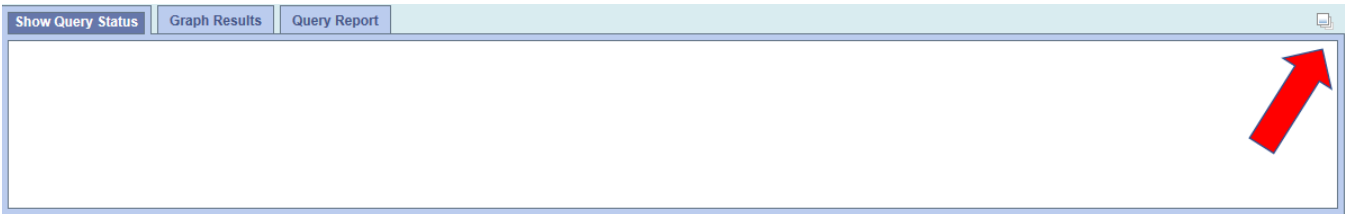
5. Query Status

The **Query Status** panel contains information regarding the state of a query.

[Show Query Status](#)
[Graph Results](#)
[Query Report](#)

There are three tabs in this panel. Show Query Status, Graph Results, and Query Report.

To expand the Query Status panel for any of the three tabs, click on the square widget in the upper right corner of the panel.

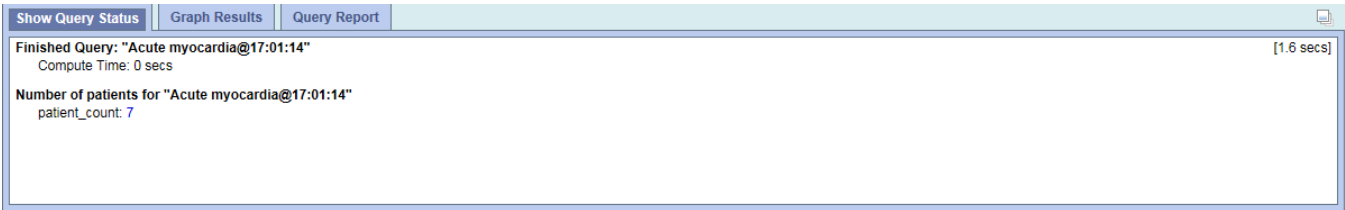


Show Query Status

While a query is running, the name of the query and how long it has been running will appear in the 'Show Query Status' tab.

Other information that shows up in this tab depends on which options are selected in the 'Run Query' popup box when the query is run.

Once the query has finished, the number of patients meeting the search criteria, and the time it took to run the query, will appear.



Graph Results

When a query has run, some results will show up in the 'Graph Results' tab, depending on what options are selected in the 'Run Query' popup box when the query is run.

If any of the breakdown categories (Age, Race, Gender, Vital Status, Length of Stay, Top 20 diagnoses, Top 20 medications, Inpatient and Outpatient) are selected in the 'Run Query' popup, a bar graph will display for each category selected.

This is the Run Query popup showing default breakdown types:

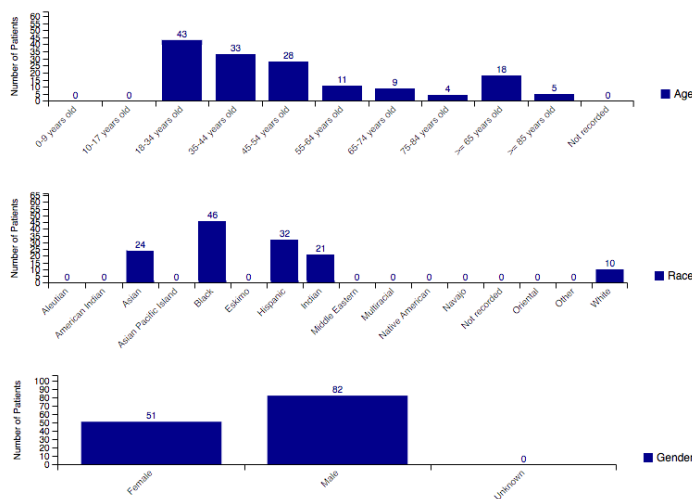
Run Query

Please type a name for the query:
Antineoplastics@16:51:27

Please check the query result type(s):

- ☒ Number of patients
- ☒ Gender patient breakdown
- ☒ Vital Status patient breakdown
- ☒ Race patient breakdown
- ☒ Age patient breakdown
- ☐ Time to event

OK Cancel



Query Report

The 'Query Report' tab displays a textual representation of the query. It can be printed by clicking on the 'Print Report' button in the upper right hand corner. To expand the tab and view the entire report, click on the square widget above the 'Print Report;' button.

Show Query Status | Graph Results | **Query Report**

i2b2 Query Report Print Report

The query entitled "Circulatory sys@15:52:59" submitted on 2019-05-02 19:53:04, was successfully completed on 2019-05-02 19:53:04. This query was performed by "i2b2 User". The search was completed in 0 seconds.

Query Definition

Temporal Constraint: Treat All Groups Independently

6. Previous Queries

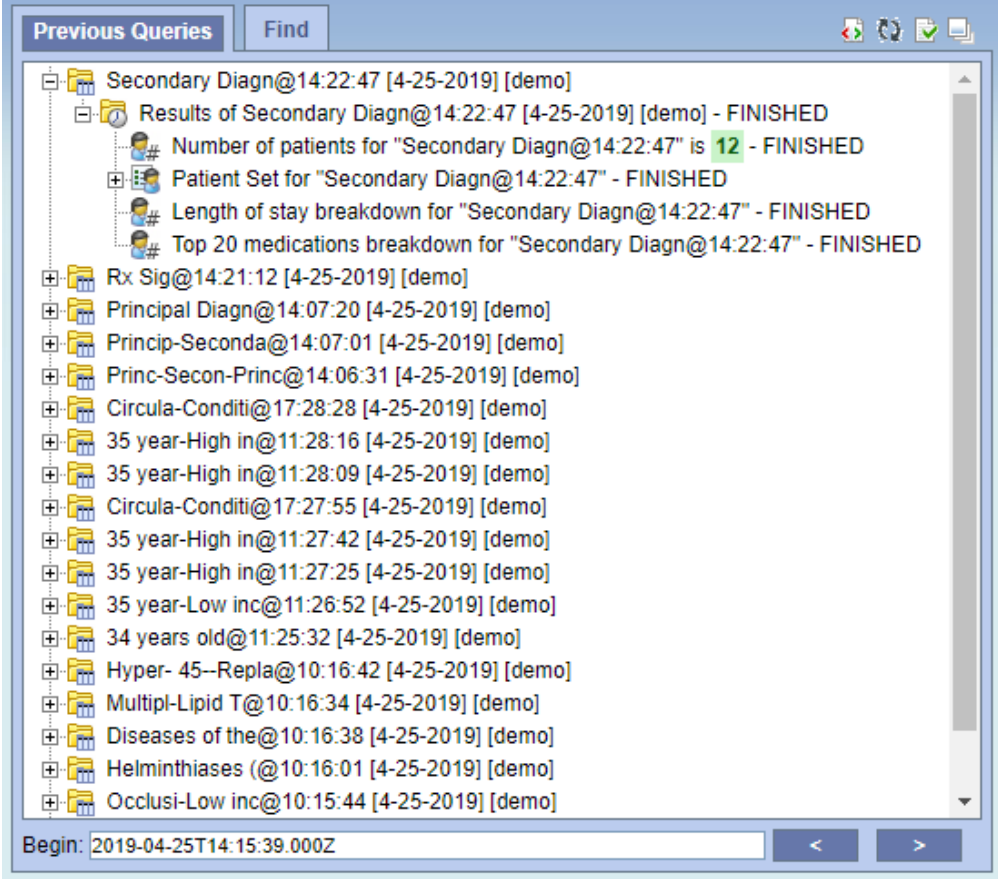
View and search queries run by the user.

- 6.1 'Previous Queries' tab
- 6.2 Find tab
- 6.3 Layout of a Previous Query Display
 - 6.3.1 Previous Query Name
 - 6.3.2 Results Folder
 - 6.3.2.1.1 Patient Set
 - 6.3.2.1.2 Encounter Set
 - 6.3.2.1.3 Number of Patients
 - 6.3.2.1.4 Breakdown
- 6.4 Navigation
 - 6.4.1 Menu
 - 6.4.1.1 Display
 - 6.4.1.2 Rename a Previous Query
 - 6.4.1.3 Delete / Remove a Previous Query
 - 6.4.1.4 Refresh the List
 - 6.4.2 Options
 - 6.4.2.1 Maximum to Display
 - 6.4.2.1.1 Queries to Display
 - 6.4.2.2 Sort Queries
 - 6.4.2.2.1 Sort by Name
 - 6.4.2.2.2 Sort by Create Date
 - 6.4.2.3 Auto Refresh
- 6.5 Using a Previous Query
 - 6.5.1 Draggable Items
 - 6.5.1.1 Previous Query
 - 6.5.1.2 Patient Set
 - 6.5.1.3 Encounter Set
 - 6.5.2 Add to 'Query Tool'
 - 6.5.2.1 Add Previous Query to 'Query Tool'
 - 6.5.2.1.1 Add Previous Query to the Query Name (New Query)
 - 6.5.2.1.2 Add Previous Query to the Query Name (Query-in-Query)
 - 6.5.2.2 Add Patient Set to the 'Query Tool'
 - 6.5.2.3 Add Encounter Set to the 'Query Tool'
 - 6.5.3 Add to 'Workplace' panel
 - 6.5.3.1 Add Previous Query to 'Workplace' Panel
 - 6.5.3.2 Add Patient Set to 'Workplace' panel
 - 6.5.3.3 Add Encounter Set to 'Workplace' panel

The 'Previous Queries' panel has 2 tabs. 'Previous Queries' tab, which lists all queries run by the user, and 'Find' tab, which allows the user to search for their previous queries.

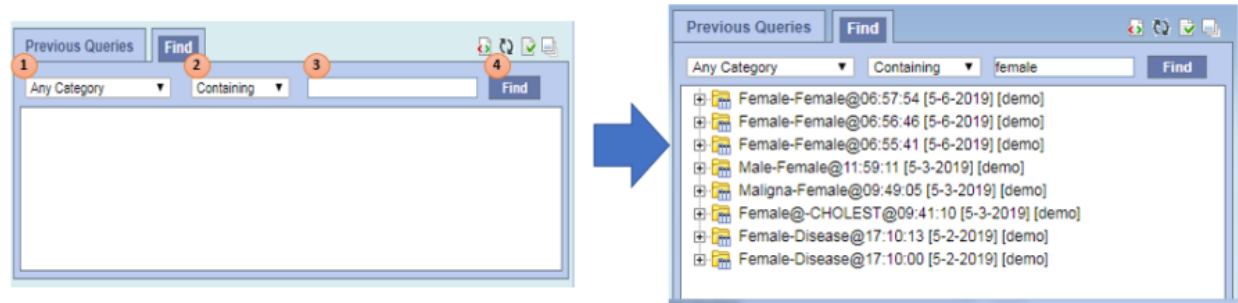
6.1 'Previous Queries' tab

The 'Previous Queries' tab displays queries run by a user, with the most recent ones listed first. Results associated with the query can also be viewed in this tab. Both a *standard i2b2 query* (📁) and a *Temporal query* (🕒) will appear in the 'Previous Queries.' Please see 3. 'Query Tool' for query types.

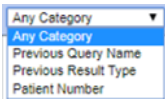


6.2 Find tab

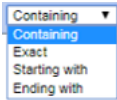
The 'Find' tab provides previous query search interface. In the first combo box (1), users can select one of the search options; search from the 'Previous Query Name', 'Previous Result Type', 'Patient Number', or any of the above categories. The second combo box (2) allows users to set the input keyword match options; 'Containing', 'Exact', 'Starting with', or 'Ending with'. It returns the search results in the same format as 'Previous Queries' tab display.



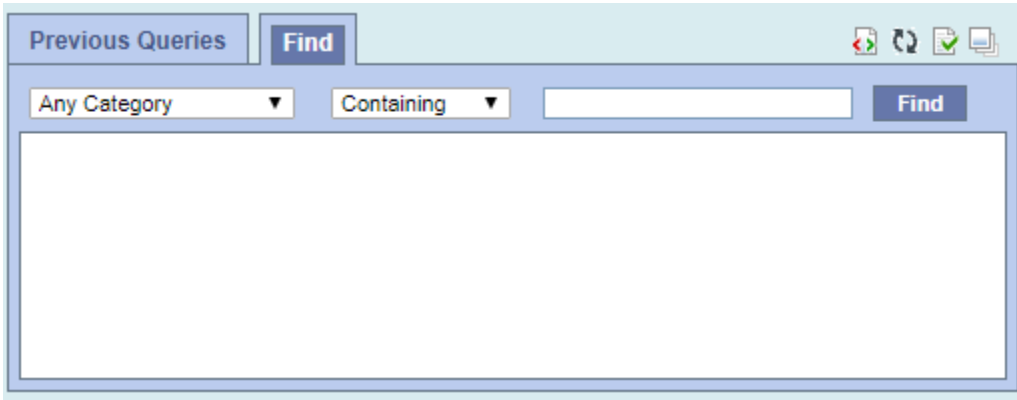
1. Select a search option (1)





2. Select a keyword match option (2)

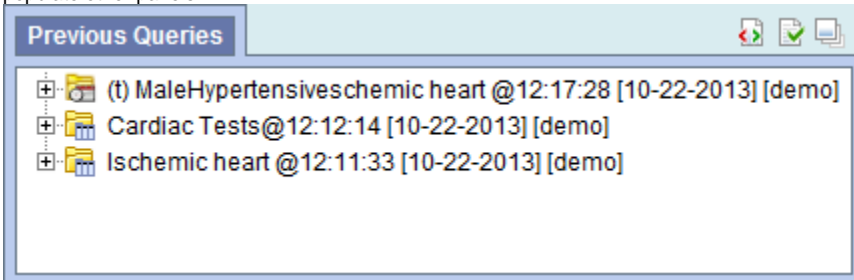


3. Enter a search keyword in the input box (3)
4. Press 'Find' button



6.3 Layout of a Previous Query Display

A **previous query** ( / ) is created when a query is run from the 'Query Tool'. These previous queries can be used to run new queries or to easily populate other panels.

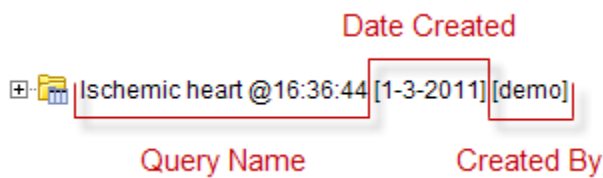


The query in the 'Previous Queries' panel is comprised of multiple hierarchical levels that can be seen by expanding each level of the tree. These levels are outlined below.



6.3.1 Previous Query Name

The name of the previous query is the top level of the hierarchal tree and is comprised of these three components.

1. **Query Name** - the name given at the time the query was created. The default name contains an abbreviated description and the time the query was run.
2. **Date** - the date the query was created.
3. **User Id** - the user who created (ran) the query.




6.3.2 Results Folder

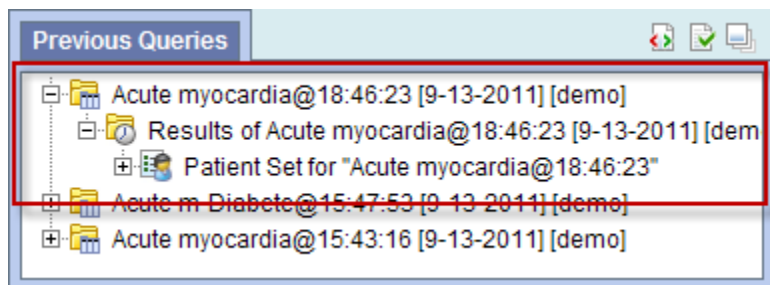
The **Results folder** () contains the results of the query. To see the query results simply expand the folder by clicking on the *plus sign* () located next to the result name.

6.3.2.1 Results


The results associated with a **previous query** are determined by the **query result type(s)** that are selected when the query is run in the 'Query Tool'.

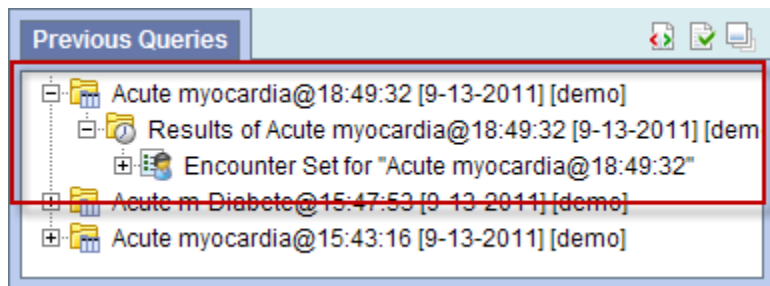
6.3.2.1.1 Patient Set

The **Patient set** () appears if *Patient set* or *Timeline* was checked at the time the query was run. The set contains all the patients who met the defined search criteria.




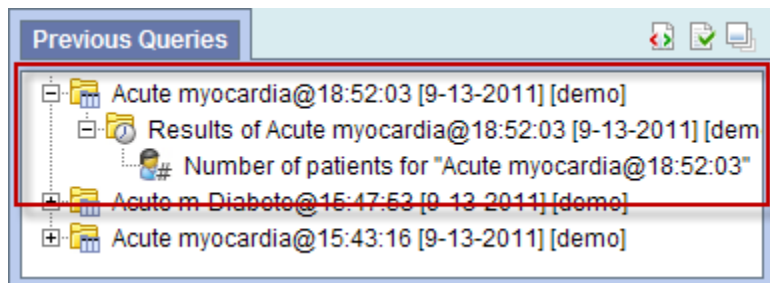
6.3.2.1.2 Encounter Set

The **Encounter Set** () appears if *Encounter set* was checked at the time the query was run. The set contains all the patients whose encounters met the defined search criteria.




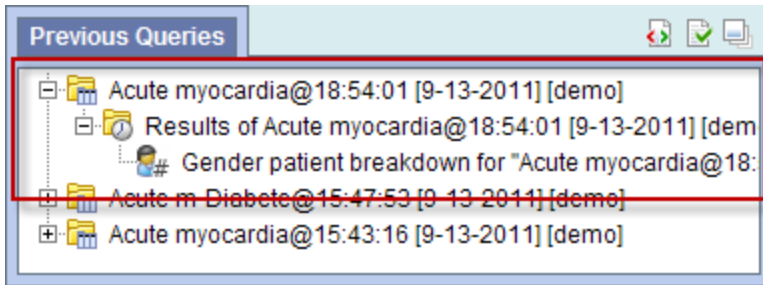
6.3.2.1.3 Number of Patients

The **Number of Patients** () appears if *Number of Patients* was checked at the time the query was run. The results are a total count for those patients who met the defined criteria.



6.3.2.1.4 Breakdown

The **breakdown** () appears if *Gender / Vital Status / Race / Age patient breakdown* was checked at the time the query was run. The results are a breakdown by gender / vital status / race / age for those patients who met the defined criteria.



6.4 Navigation

6.4.1 Menu

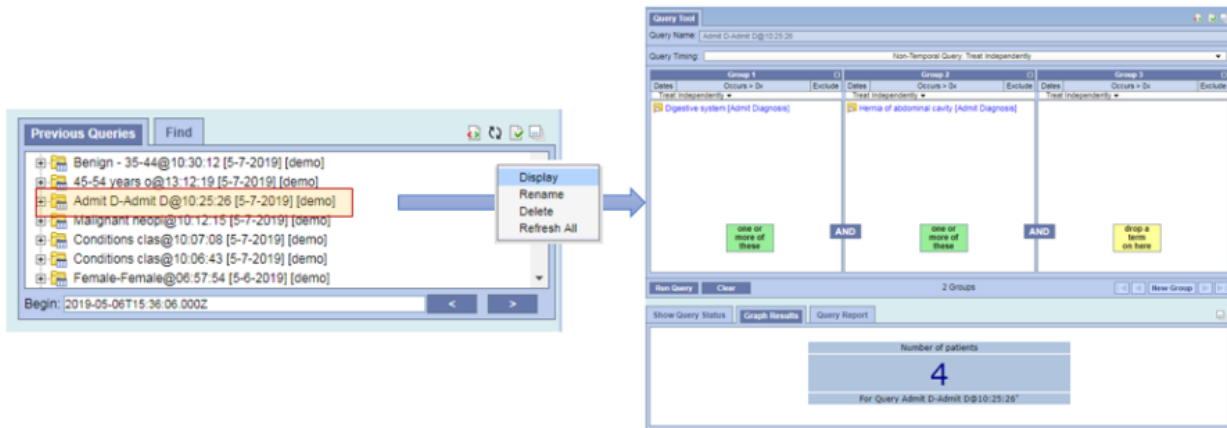
Using the mouse right click on the 'Previous Queries' panel, users can open the **Previous Queries Menu**. 'Display,' 'Rename,' 'Delete' options act on the selected, or mouse hovered previous query. When the menu is called from a blank space, those menu options are applied to the previous target query.



6.4.1.1 Display

Users can see a previous query information by selecting **Display** from the *popup menu*. It loads its query name, the query design, and the results in the 'Query Tool' panel.

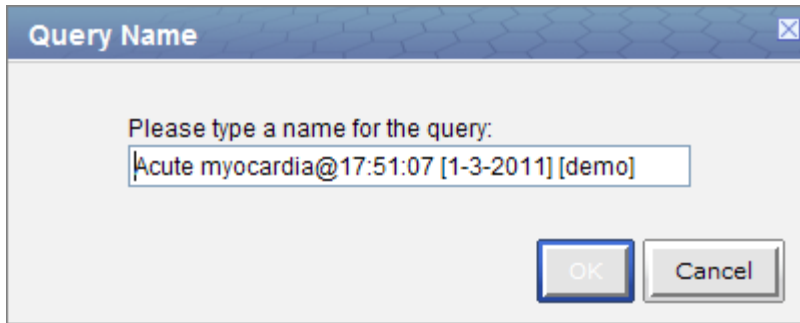
1. Using the *right mouse button*, click on the **Previous Query** to be renamed.
2. A pop-up menu will open.
3. Select **Display** from the menu.
4. The rename query dialog box will open.



6.4.1.2 Rename a Previous Query

Users can rename a previous query from the list by selecting **Rename** from the *popup menu*.

1. Using the *right mouse button*, click on the **Previous Query** to be renamed.
2. A pop-up menu will open.
3. Select **Rename** from the menu.
4. The rename query dialog box will open.



5. Enter the new name of the previous query and click on the **OK button**.

6. The previous query will now display in the view with the new name.

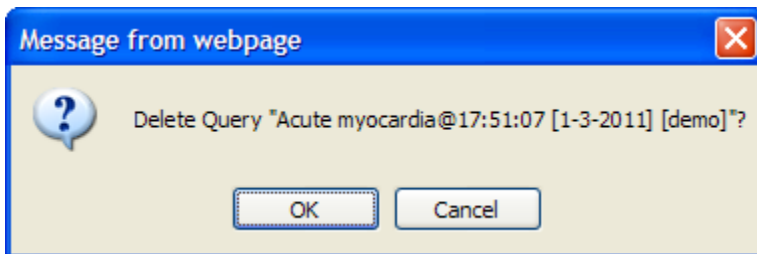
NOTE:

When dragging a previous query to another view the new name will appear when it is dropped.

6.4.1.3 Delete / Remove a Previous Query

Users can rename a previous query from the list by selecting **Delete** from the *pop-up menu*.

1. Using the *right mouse button*, click on the **Previous Query** to be deleted.
2. A pop-up menu will open.
3. Select **Delete** from the menu.
4. A message box will open asking if you are sure you want to delete the query.



5. Click on the **OK button** to delete the query

WARNING:


Once you click on Delete, the previous query will be removed from the view and there is no way to restore it. Therefore, you need to make sure you want to remove it from the list.

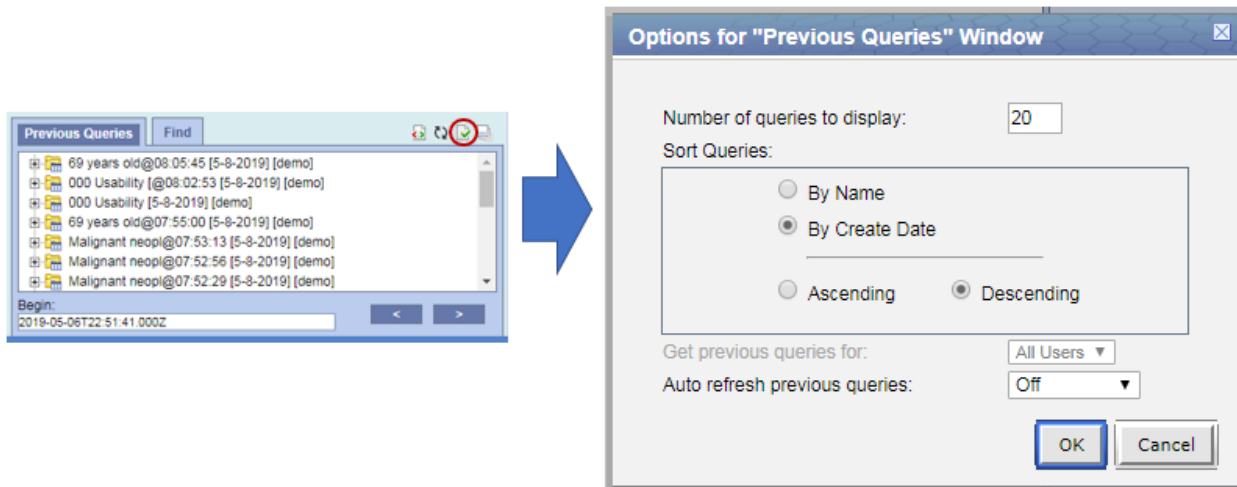
6.4.1.4 Refresh the List

Users can refresh the list of previous queries from the list by selecting **Refresh All** from the *pop-up menu*.

1. Using the *right mouse button*, click on any of the previous queries in the list.
2. A pop-up menu will open.
3. Select **Refresh All** from the menu.
4. The list of previous queries and their status will be refreshed.

6.4.2 Options

The third right top button panel ( , the red circle in the following image) in the 'Previous Queries' prompts an **Options** window. Users can define how many previous queries to display, the order in which they will appear in the list, and auto refresh setting.



6.4.2.1 Maximum to Display

6.4.2.1.1 Queries to Display

The **Maximum number of queries to display** defines how many previous queries will be visible in the '**Previous Queries**'. Once the maximum number is reached the oldest query will no longer appear in the view.

TIP:

Recommendation: Use the 'Workplace' panel to save those previous queries that will be used often. In addition to being more convenient it will also prevent you from losing a common query if the maximum number to display has been reached.

6.4.2.2 Sort Queries

6.4.2.2.1 Sort by Name

Selecting to sort **By Query Name** will sort the queries in the '**Previous Queries**' alphabetically by the name of the query. Once you select to sort by name, you need to define whether or not it will be in ascending or descending order.

Ascending: queries are displayed in alphabetical order with the *beginning* of the *alphabet* at the *beginning* of the list. (A to Z)

Descending: queries are displayed in alphabetical order with the *beginning* of the *alphabet* at the *end* of the list. (Z to A)

6.4.2.2.2 Sort by Create Date

Selecting to sort **By Create Date** will sort the queries in the '**Previous Queries**' by the date and time the query was created. Once you select to sort by the creation date, you need to define whether or not it will be in ascending or descending order.

Ascending: displays the *oldest* query *first*.

Descending: displays the *newest* query *first*.


NOTE:

Renaming a query will not affect the sort order as the date and time is stored with the previous query.

6.4.2.3 Auto Refresh

Users can turn off the auto refresh, or select the auto refresh frequency from the combo box.

NOTE:



If the auto refresh option is turned off, users need to use the refresh button () to see the updated previous queries list.

6.5 Using a Previous Query

6.5.1 Draggable Items

Different parts of the previous query can be dragged and dropped (copied) from the 'Previous Queries' to other views in the i2b2 Web Client.

6.5.1.1 Previous Query

Associated with each **previous query** ( / ) are the items used to run the query, any constraints that were defined, and the results. A previous query can be added to other views by dragging the previous query name from 'Previous Queries' to one of the following views.


- 'Query Tool'; drop in the *panel* or *Query Name*.
- 'Workplace' panel; drop in a *user* or *shared folder*

6.5.1.2 Patient Set

A specific set of patients can be added to other views by dragging the **Patient set** () from 'Previous Queries' to one of the following views.

- 'Query Tool'; drop in the *panel*.
- 'Workplace' panel; drop in a *user* or *shared folder*

6.5.1.3 Encounter Set

A specific set of encounters (visit list) can be added to other views by dragging the **Encounter Set** () from 'Previous Queries' to one of the following views.

- 'Query Tool'; drop in the *panel*.
- 'Workplace' panel; drop in a *user* or *shared folder*

6.5.2 Add to 'Query Tool'

The 'Query Tool' is designed to simplify the process of retrieving information from the database associated to the i2b2 Web Client.

Query Tool

Query Name:

Ischemic heart @16:36...

Temporal Constraint:

Treat all groups independently

Group 1

DatesOccurs > 0xExclude

Treat Independently

drop a term on here

Group 2

DatesOccurs > 0xExclude

Treat Independently

Group 3

DatesOccurs > 0xExclude

Treat Independently

Run Query

Clear

Print Query

0 Groups

◀◀

New Group

▶▶

Within the 'Previous Queries' there are several items that can be used in the 'Query Tool' to run a query. The following sections explain how to add the previous query, patient set and encounter set to the 'Query Tool'.

6.5.2.1 Add Previous Query to 'Query Tool'

Within the 'Query Tool', a previous query can be added to one of the following two locations.

Query Name field	The items and constraints from the original query will be used to create a new query. This information can be edited to make a new query or can be used as is to run the query again.
Panel (Group)	Used within a new query (query-in-query). The information associated with the previous query can not be edited. Add additional search criteria (items) to be used in the new query.

6.5.2.1.1 Add Previous Query to the Query Name (New Query)

1. Highlight the **previous query** ( / ) by clicking on the name of the query.

While holding the *left mouse button* down, drag the item to the 'Query Tool'.

2. Drop the item into the **Query Name field**.

Query Tool

Query Name:

Ischemic heart @16:36...

Temporal Constraint:

Treat all groups independently

Group 1

DatesOccurs > 0xExclude

Treat Independently

drop a term on here

Group 2

DatesOccurs > 0xExclude

Treat Independently

Group 3

DatesOccurs > 0xExclude

Treat Independently

Run Query

Clear

Print Query

0 Groups

New Group

3. The item(s) associated with the previous query will display in the appropriate group(s), the name of the query will appear at **Query Name**, and any constraints that were defined when the original query was run will now default with the new query.

Query Tool

Query Name: Ischemic heart @16:36:44

Temporal Constraint: Treat all groups independently

Group 1			Group 2			Group 3		
Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude
Treat Independently			Treat Independently			Treat Independently		
Ischemic heart disease <div>one or more of these</div>			<div>drop a term on here</div>					

Run Query Clear Print Query 1 Group

 < < New Group > >

NOTE:

When you run the query it will receive a new name. This is to distinguish the first previous query from the second.

6.5.2.1.2 Add Previous Query to the Query Name (Query-in-Query)

1. Highlight the **previous query** () by clicking on the name of the query.
While holding the *left mouse button* down, drag the item to the 'Query Tool'.
2. Drop the item into the **Query Name** field.

Query Tool

Query Name: Ischemic heart @20:12:12...

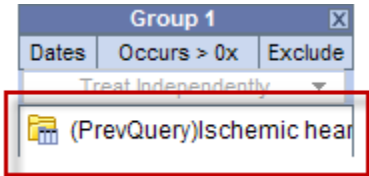
Temporal Constraint: Treat all groups independently

Group 1			Group 2			Group 3		
Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude
Treat Independently			Treat Independently			Treat Independently		
<div>drop a term on here</div>								

Run Query Clear Print Query 0 Groups

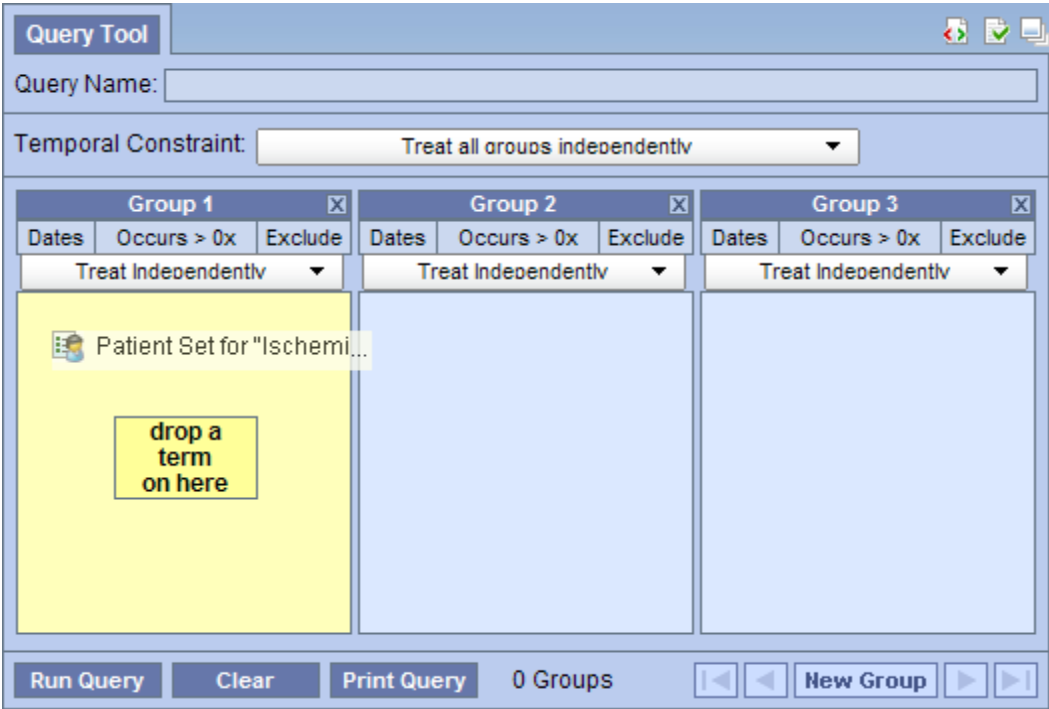
 < < New Group > >

3. The previous query will now display in the panel for Group 1.

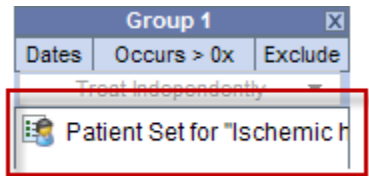


6.5.2.2 Add Patient Set to the 'Query Tool'

- 1. Click on the plus sign (+) next to the name of the previous query that contains the patient set.
 - 2. Click on the plus sign (+) next to the results folder.
 - 3. Highlight the **Patient set** () by clicking on its name.
- While holding the *left mouse button* down, drag the item over to the 'Query Tool'
- 4. Drop the item into the **panel** labeled **Group 1**.



5. The item will now display in the panel for Group 1.

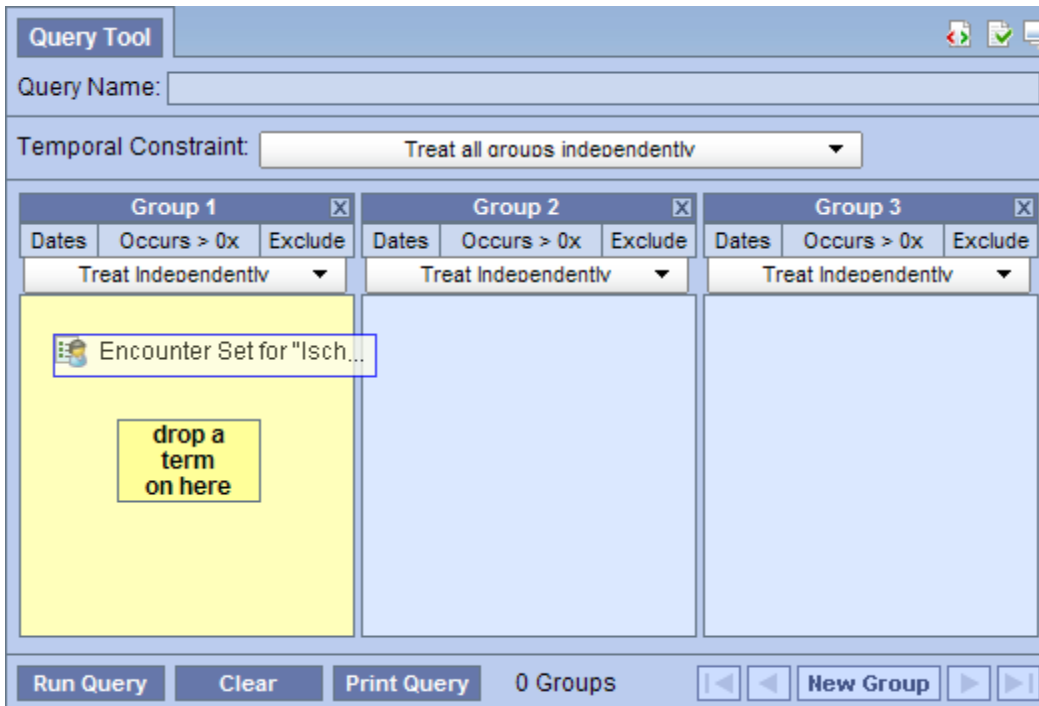


6.5.2.3 Add Encounter Set to the 'Query Tool'

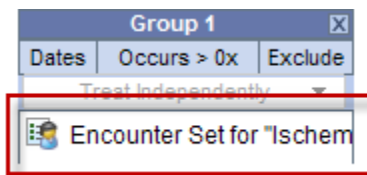
- 1. Click on the plus sign (+) next to the name of the previous query that contains the encounter set.
- 2. Click on the plus sign (+) next to the results folder.
- 3. Highlight the **Encounter set** () by clicking on its name.

While holding the *left mouse button* down, drag the item over to the 'Query Tool'

4. Drop the item into the **panel** labeled **Group 1**.

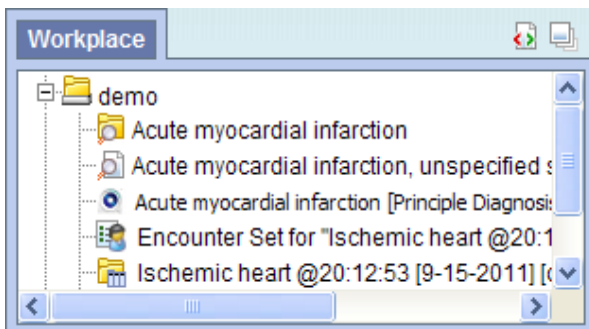


5. The item will now display in the panel for Group 1.





6.5.3 Add to 'Workplace' panel

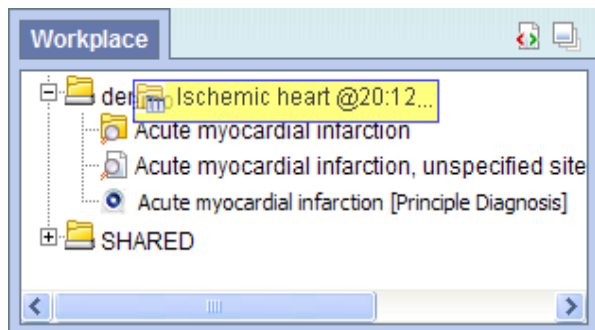
Information in the workplace is related to the most common concepts and queries that an individual uses and in essence becomes their personal workplace.



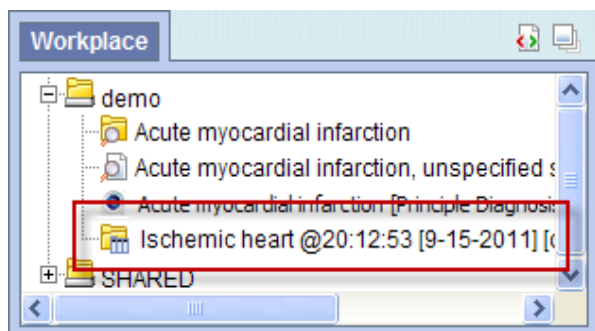
6.5.3.1 Add Previous Query to 'Workplace' Panel

1. Highlight the **previous query** ( / ) by clicking on the name of the query.
2. While holding the *left mouse button* down, drag the previous query name to the **'Workplace' panel**.




3. Drop the previous query into either your workplace folder or the shared folder.

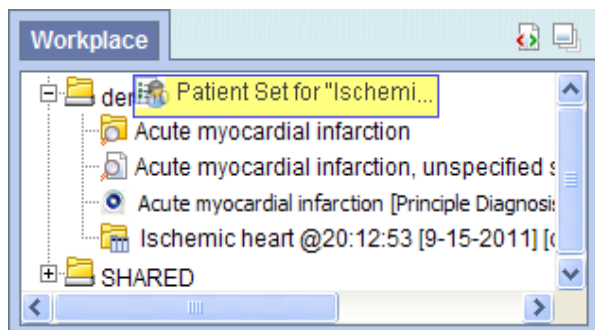


4. The previous query will now appear in the workplace with the same name.

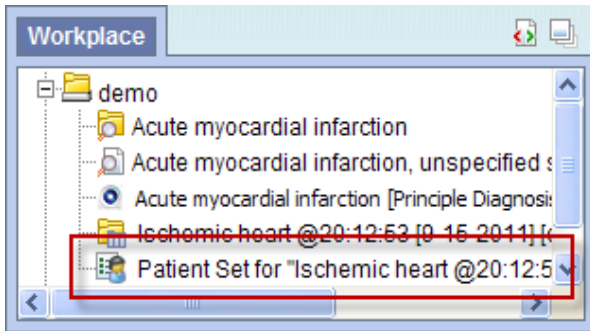


6.5.3.2 Add Patient Set to 'Workplace' panel




1. Click on the plus sign () next to the name of the previous query that contains the patient set.
2. Click on the plus sign () next to the results folder.
3. Highlight the **Patient set**  by clicking on its name.
4. While holding the *left mouse button* down, drag the **Patient set** to the **'Workplace' panel**.
5. Drop the Patient set into either your workplace folder or the shared folder.

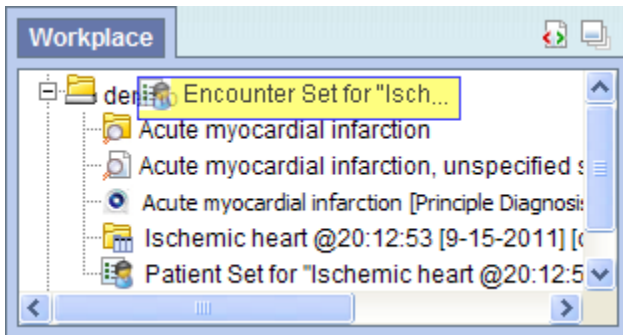


6. The Patient set will now appear in the workplace.

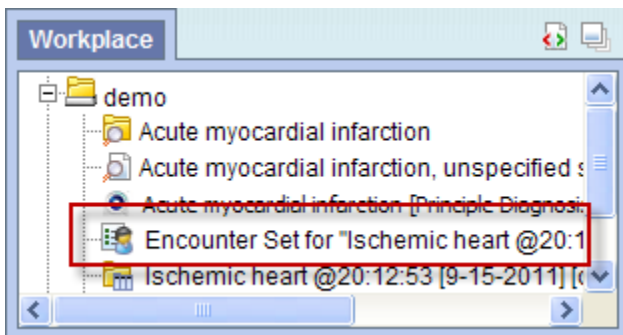


6.5.3.3 Add Encounter Set to 'Workplace' panel

1. Click on the plus sign () next to the name of the previous query that contains the encounter set.
2. Click on the plus sign () next to the results folder.
3. Highlight the **Encounter Set** () by clicking on its name.
4. While holding the *left mouse button* down, drag the **Encounter set** to the **'Workplace' panel**.
5. Drop the encounter set into either your workplace folder or the shared folder.



6. The encounter set will now appear in the workplace.



7. Workplace

A users' personal workspace, for storing favorite concepts and queries.

7.1 Layout of the 'Workplace' panel

7.1.1 Containers

7.1.2 Folders

7.1.3 Leaves (Items)

7.2 Adding a folder and items

7.2.1 Folders and Items Draggable to Workplace

7.2.2 Adding a Folder

7.2.3 Adding Items

7.2.3.1 Adding Concept, Concept Folder, Modifier, and Modifier Folder

Adding from 'Find Terms' tab

Adding from 'Navigate Terms' tab

7.2.3.2 Adding Previous Query, Patient Set, and Encounter Set

'Previous Queries' Panel

Adding Previous Query from 'Previous Queries' Panel

Adding Patient Set or Encounter Set from 'Previous Queries' Panel

7.3 Navigation

7.3.1 Folders

7.3.1.1 Expand / Collapse a Folder

7.3.1.2 Rename a Folder

7.3.1.3 Annotate a Folder

7.3.1.4 Delete a Folder

7.3.2 Items

7.3.2.1 Rename Items

7.3.2.2 Annotate Items

7.3.2.3 Delete Items

7.4 Using Items in 'Workplace' Panel

7.4.1 Items Draggable from Workplace

7.4.2 Using Folders, Concepts, Modifier Folders, Modifiers, Patient Set, and Encounter Set

Adding to 'Query Tool' Panel

7.4.3 Using Previous Query

Adding Previous Query to Query Name in 'Query Tool' Panel (New Query)

Adding Previous Query to Group in 'Query Tool' Panel (Query-in-Query)

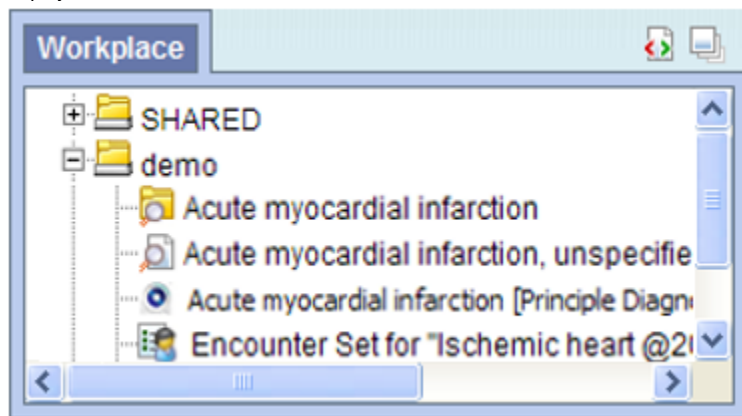
The main objectives of the 'Workplace' are:

- Save and organize user specific items.
- Share information with other project users.
- Project managers can view the workplace for individual team members.

The items stored in the 'Workplace' panel can be used in many of the i2b2 panels and plug-ins, such as the 'Query Tool'.

7.1 Layout of the 'Workplace' panel








The 'Workplace' panel is hierarchical display of items (concepts, queries) added by the user. There are three main branches or components of the tree that displays.



7.1.1 Containers




A **folder** () contains other folders and / or items added by the user. It can be expanded and collapsed by clicking on the *plus sign* () or *negative sign* () next to it.

Leaves (items) are the lowest level of the hierarchy. They cannot be expanded further. Some examples of items are listed below.


- Concepts ()
- Group of concepts (ontology folder) ()
- Modifiers ()
- Group of modifiers (modifier folder) ()
- Patient set ()
- Encounter set ()
- Previous query ()

Folders and Items can be dragged and dropped (copied) into the 'Workplace' panel from other panels in the i2b2 Web Client.

A Concept Folder () and all its concepts (children), a Modifier Folder (), a concept (), a modifier () can be dragged to the 'Workplace' from the 'Navigate/Find Terms' panel.

A Patient set () , An Encounter set () ,A previous query () can be added to the 'Workplace' by dragging from the 'Previous Queries' panel.

1. Using the *right mouse button*, click on your user folder in the 'Workplace'.
2. A pop-up menu will open.



Script Prompt:

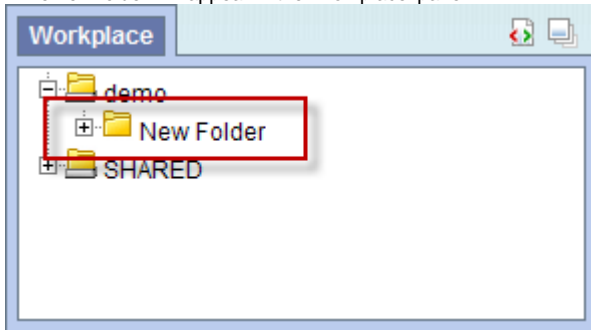
What name should be used for the new folder?

New Folder

OK

Cancel

- Click on the **OK button**.
- The new folder will appear in the 'Workplace' panel.

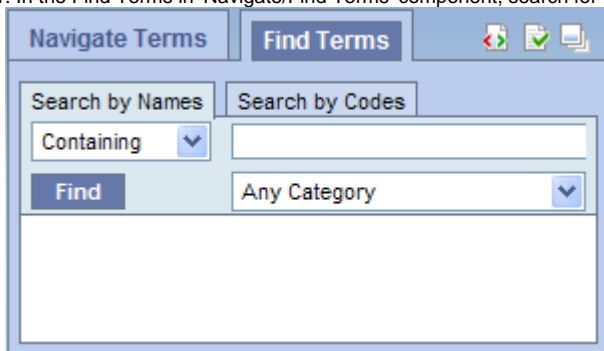



7.2.3 Adding Items

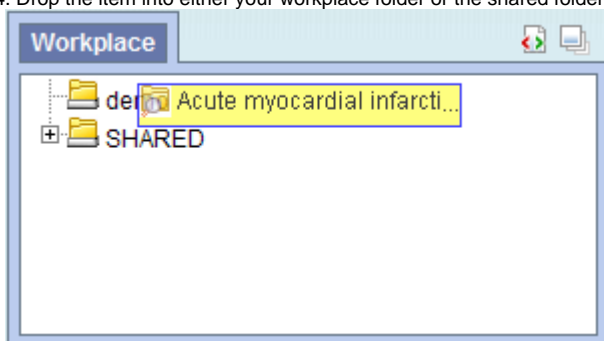
7.2.3.1 Adding Concept, Concept Folder, Modifier, and Modifier Folder

Adding from 'Find Terms' tab

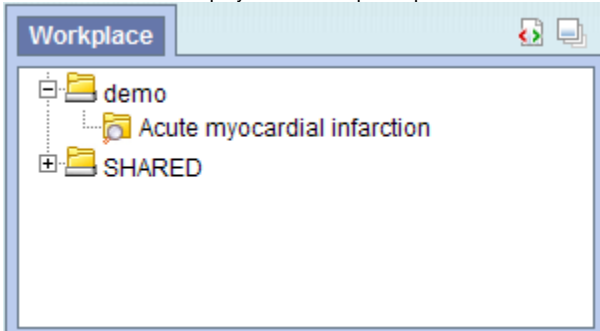
- In the Find Terms in 'Navigate/Find Terms' component, search for the item(s) to add.



- Highlight the concept folder() or other type (concept, modifier, modifier folder) of item by clicking on its name.
- While holding the *left mouse button* down, drag the item over to the 'Workplace' component.
- Drop the item into either your workplace folder or the shared folder.

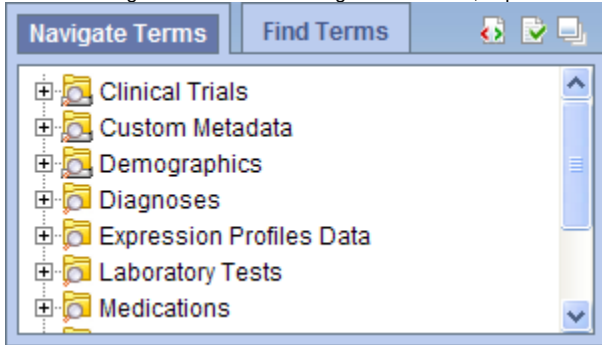


- The item will now display in the 'Workplace' panel with the same name.




Adding from 'Navigate Terms' tab

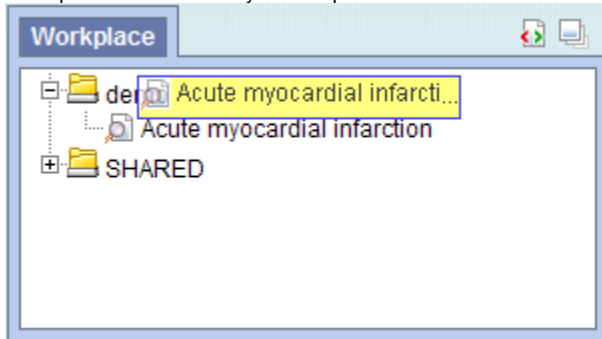
1. In the 'Navigate/Find Terms > Navigate Terms' tab, expand the folder(s) that contains the concept or grouping of concepts you want to add.



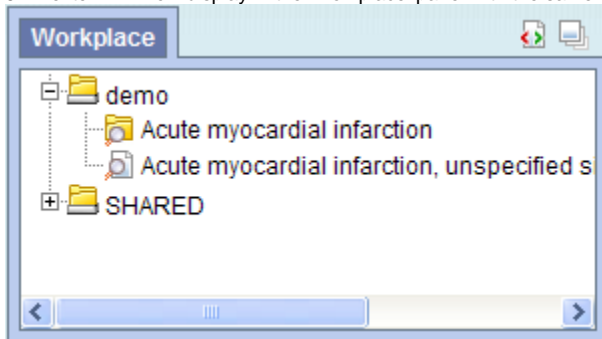
NOTE:

How the items are grouped and displayed is dependent on how the database is setup.

2. Highlight the folder() or other type (concept, modifier, modifier folder) of item by clicking on its name.
3. While holding the *left mouse button* down, drag the item over to the 'Workplace'.
4. Drop the item into either your workplace folder or the shared folder.



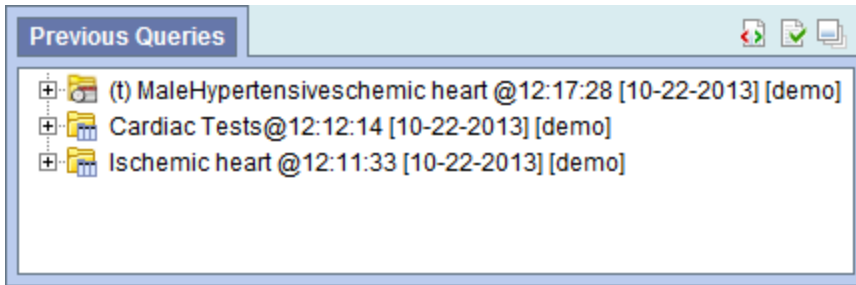
5. The item will now display in the 'Workplace' panel with the same name.




7.2.3.2 Adding Previous Query, Patient Set, and Encounter Set

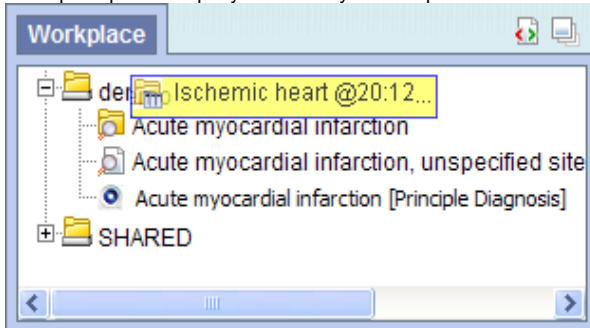
'Previous Queries' Panel

The '**Previous Queries**' panel displays the queries that were run by the user. Each previous query contains a set of results; within these results are the result options that were selected when the query was originally run. The result options include Patient set, Encounter set, Number of patients as well as various other patient breakdowns

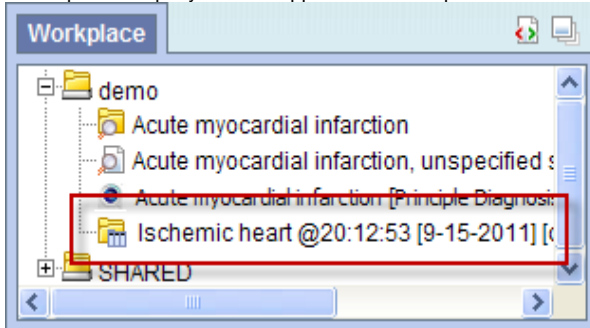


Adding Previous Query from 'Previous Queries' Panel





1. Highlight the **previous query** () by clicking on the name of the query.
2. While holding the *left mouse button* down, drag the item to the **'Workplace' panel**.
3. Drop the previous query into either your workplace folder or the shared folder.

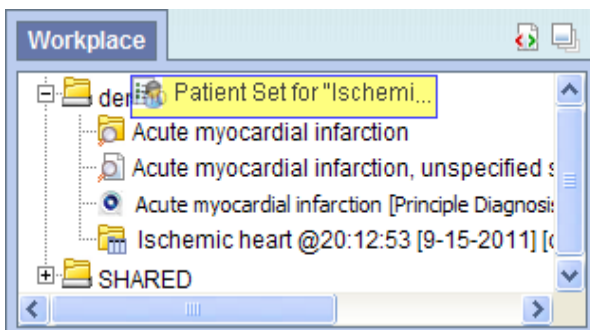


4. The previous query will now appear in the workplace with the same name.

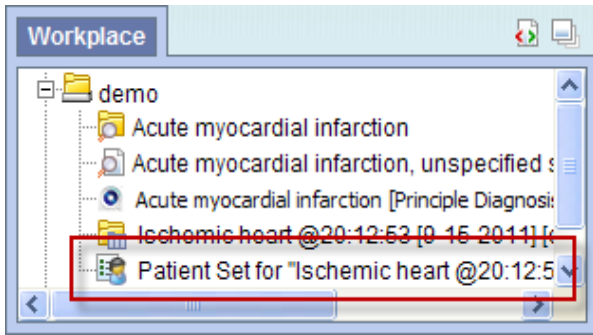


Adding Patient Set or Encounter Set from 'Previous Queries' Panel

1. Click on the plus sign () next to the name of the previous query that contains the patient set.
2. Click on the plus sign () next to the results folder.
3. Highlight the **Patient set**() or the **Encounter set**() by clicking on its name.
4. While holding the *left mouse button* down, drag the **Patient Set** or the **Encounter set** to the **'Workplace' panel**.
5. Drop the patient or encounter set into either your workplace folder or the shared folder.





6. The patient set will now appear in the workplace.




7.3 Navigation

7.3.1 Folders


7.3.1.1 Expand / Collapse a Folder

Users can expand or collapse a folder by clicking on the plus sign () or negative sign () next to the folder icon.

Expand (Open) a Folder

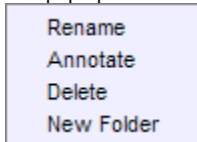
1. Click on the **plus sign** () next to the folder in the *'Workplace' panel*.
2. The folder will open and all the items in the folder will display.

Collapse (Close) a Folder

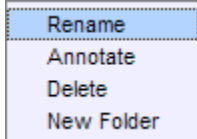
1. Click on the **negative sign** () next to the folder in the *'Workplace' panel*.
2. The folder will close and all the items in the folder will display.

7.3.1.2 Rename a Folder

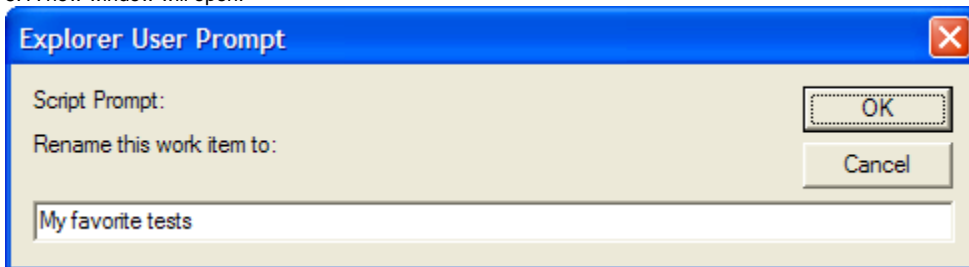
1. Users can easily **rename** an existing folder.
2. Using the *right mouse button*, click on the folder you want to rename.
3. A pop-up menu will open.



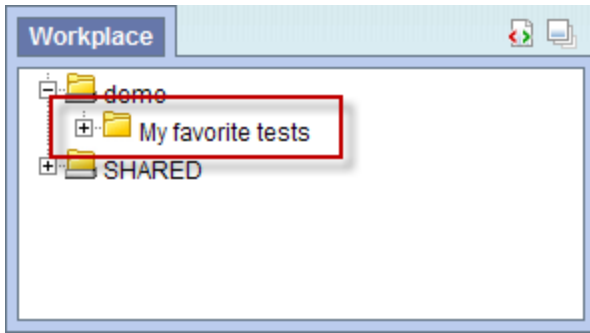
4. Select **Rename** from the list.



5. A new window will open.



6. In the text box change the current name to the new name.
7. Click on the **OK button**.
8. The folder will appear in the *'Workplace' panel* with the new name.



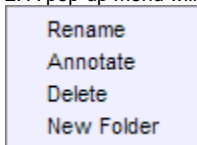
7.3.1.3 Annotate a Folder

Users can change the default **annotation** for any of their folders in the 'Workplace' panel.

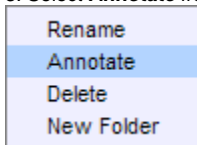
NOTE:

The annotation is what is displayed in the tool tip.

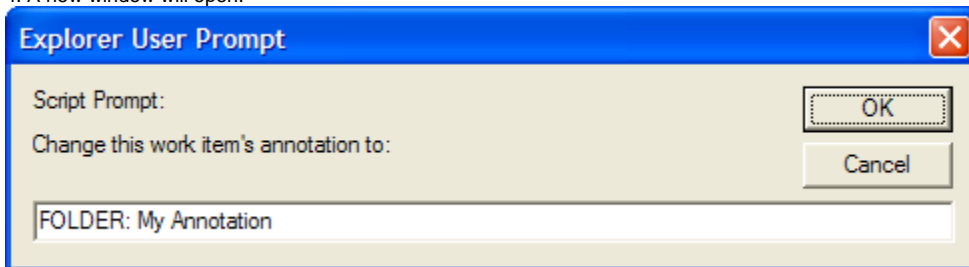
1. Using the *right mouse button*, click on the folder you want to annotate.
2. A pop-up menu will open.



3. Select **Annotate** from the list.



4. A new window will open.



5. In the text box enter the text you want to appear when the tooltip is displayed.
6. Click on the **OK** button.
7. Using the *mouse*, hover over the folder you just annotated.
8. The text you entered will display as a tool tip.

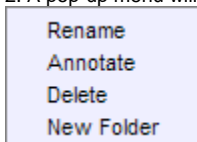
7.3.1.4 Delete a Folder

Users can remove a folder from the 'Workplace' panel.

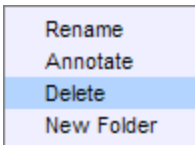
WARNING:

All items in the folder will be deleted when the folder is removed. It is recommended that you move those items you want to keep to another folder.

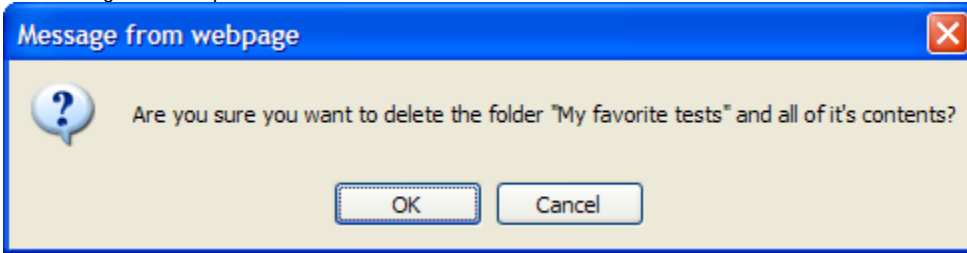
1. Using the *right mouse button*, click on the folder you want to delete.
2. A pop-up menu will open.



3. Select **Delete** from the list.



4. A message box will open.



5. Click on the **OK button**.

6. The folder and all of its contents will no longer appear in the 'Workplace' panel.

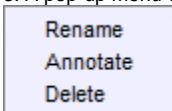
7.3.2 Items

7.3.2.1 Rename Items

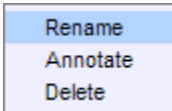
1. Users can easily **rename** an item in the 'Workplace' panel.

2. Using the *right mouse button*, click on the item you want to rename.

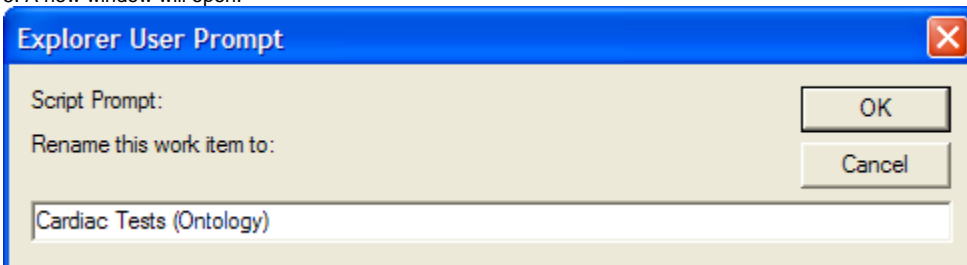
3. A pop-up menu will open.



4. Select **Rename** from the list.



5. A new window will open.



6. In the text box change the current name to the new name.

7. Click on the **OK button**.

8. The item will appear in the 'Workplace' panel with the new name.

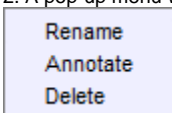
7.3.2.2 Annotate Items

Users can change the default **annotation** for any of the items in their Workplace folder.

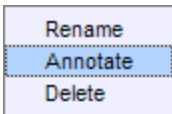
NOTE:
The annotation is what is displayed in the tool tip.

1. Using the *right mouse button*, click on the item you want to annotate.

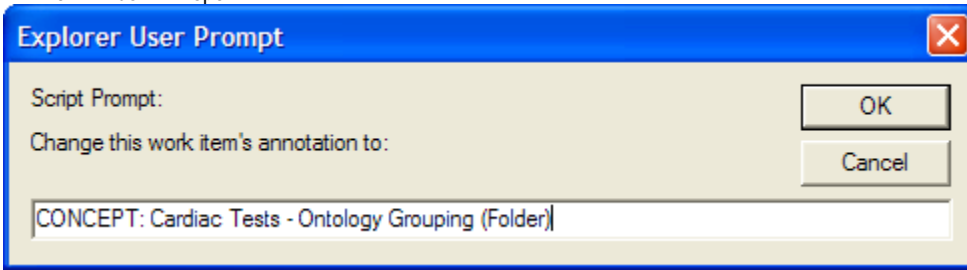
2. A pop-up menu will open.



3. Select **Annotate** from the list.



4. A new window will open.



5. In the text box enter the text you want to appear when the tooltip is displayed.

6. Click on the **OK button**.

7. Using the *mouse*, hover over the item you just annotated.

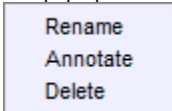
8. The text you entered will display as a tool tip.

7.3.2.3 Delete Items

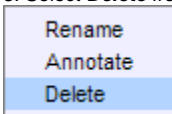
Users can remove items from the 'Workplace' panel.

1. Using the *right mouse button*, click on the item you want to delete.

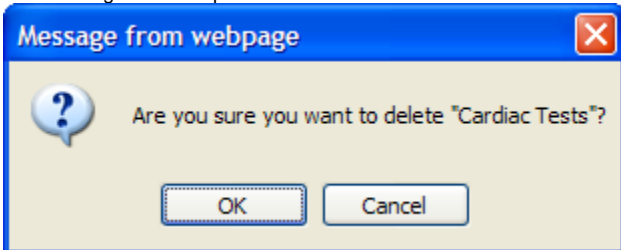
2. A pop-up menu will open.



3. Select **Delete** from the list.



4. A message box will open.



5. Click on the **OK button**.

6. The item will no longer appear in the 'Workplace' panel.






7.4 Using Items in 'Workplace' Panel


7.4.1 Items Draggable from Workplace

Items can be dragged and dropped (copied) from the 'Workplace' panel to other panels in the i2b2 Web client.

- - Ontology Folder () and all its concepts (children)

NOTE:
User folders cannot be dragged from the 'Workplace' panel.







- Modifier Folder () and all its modifiers (children)
- Concept ()
- Modifier ()
- Previous Query ()
- Patient Set ()

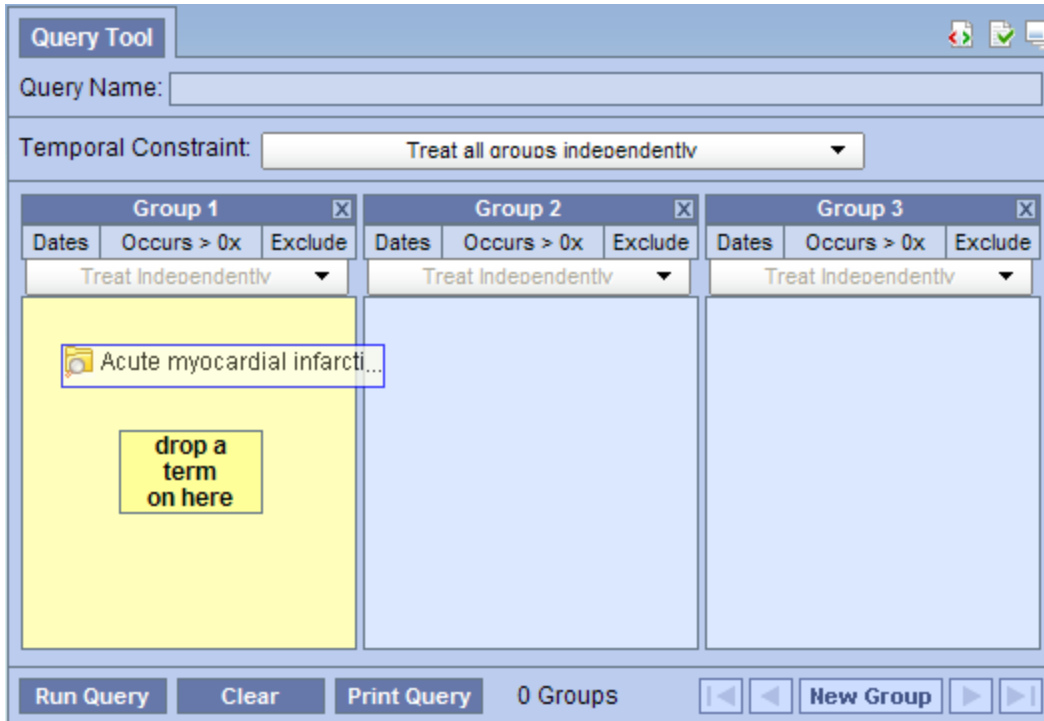
- Encounter Set ()

7.4.2 Using Folders, Concepts, Modifier Folders, Modifiers, Patient Set, and Encounter Set

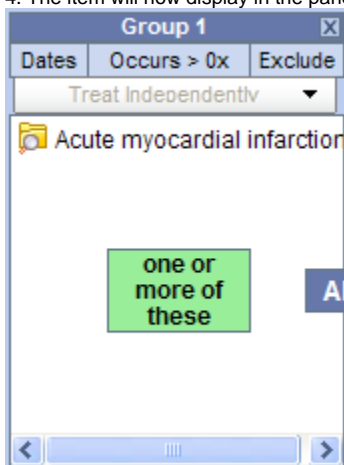
A folder or individual concept can be added to the 'Query Tool' Panel by simply dragging the item from **'Workplace' panel** and dropping it into one of the panels in the **'Query Tool' panel**.

Adding to 'Query Tool' Panel

1. Highlight the **folder** (), **concept** (), **modifier folder** (), **modifier** (), **patient set** (), or **encounter set** () by clicking on the name of the folder.
2. While holding the *left mouse button* down, drag the item over to the **'Query Tool' panel**.
3. Drop the item into the **panel** labeled **Group 1**.



4. The item will now display in the panel for Group 1.





7.4.3 Using Previous Query

A **previous query** can be used to run a new query or as an item within a query (query-in-query). To add a previous query to the **'Query Tool' panel** simply drag the query name from the **'Workplace' panel**.



Within the 'Query Tool' panel, the previous query can be added to one of the following two locations.

Query Name field	The items and constraints from the original query will be used to create a new query. This information can be edited to make a new query or can be used as is to run the query again.
Panel (Group)	Used within a new query (query-in-query). The information associated with the previous query cannot be edited. Add additional search criteria (items) to be used in the new query.

NOTE:


The process of adding a previous query to the 'Query Tool' panel is the same for both standard i2b2 queries () and temporal queries ().

Adding Previous Query to Query Name in 'Query Tool' Panel (New Query)

- 1. Highlight the **previous query** ( / ) by clicking on the name of the query.
- 2. While holding the *left mouse button* down, drag the item to the '**Query Tool**' panel.
- 3. Drop the item into the **Query Name field**.

Query Tool

Query Name:

 Ischemic heart @16:36...

Temporal Constraint:

Treat all groups independently

Group 1

DatesOccurs > 0xExclude

Treat Independently

drop a term on here

Group 2

DatesOccurs > 0xExclude

Treat Independently

Group 3

DatesOccurs > 0xExclude

Treat Independently

Run Query

Clear

Print Query

0 Groups

◀◀

New Group

▶▶

- 4. The item(s) associated with the previous query will display in the appropriate group(s), the name of the query will appear at **Query Name**, and any constraints that were defined when the original query was run will now default with the new query.

Query Tool

Query Name: Ischemic heart @16:36:44

Temporal Constraint: Treat all groups independently

Group 1			Group 2			Group 3		
Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude
Treat Independently			Treat Independently			Treat Independently		
Ischemic heart disease <div>one or more of these</div>			<div>AND</div>			<div>drop a term on here</div>		

Run Query Clear Print Query 1 Group New Group

NOTE:

When you run the query it will receive a new name. This is to distinguish the first previous query from the second.

Adding Previous Query to Group in 'Query Tool' Panel (Query-in-Query)

1. Highlight the **previous query** (/) by clicking on the name of the query.
2. While holding the *left mouse button* down, drag the item to the '**Query Tool**' panel.
3. Drop the item into the **panel** labeled **Group 1**.

Query Tool

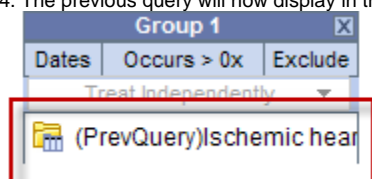
Query Name:

Temporal Constraint: Treat all groups independently

Group 1			Group 2			Group 3		
Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude
Treat Independently			Treat Independently			Treat Independently		
Ischemic heart @20:12:44 <div>drop a term on here</div>								


Run Query Clear Print Query 0 Groups New Group

4. The previous query will now display in the panel for Group 1.



8. Other Operations

Message Log

The Message Log allows users to view debug messages if the webclient is in debug mode. This shows the XML messages that pass between the client and server. The Message Log can be opened via the link in the upper right corner of the screen, or via any of the  buttons (which will open a filtered view showing only messages relevant to the view from which it was selected). Debug mode can be enabled by an administrator, by modifying the [i2b2_config_data.js](#) file.