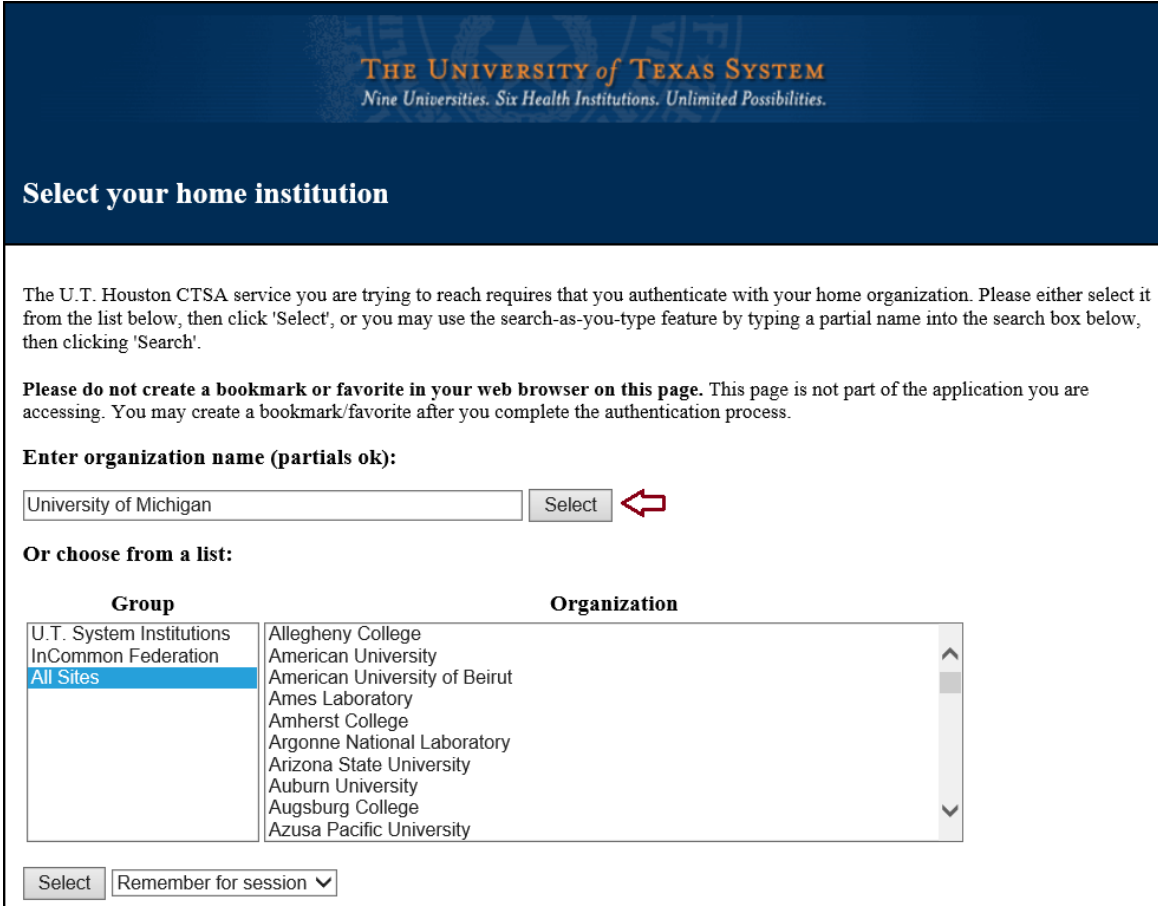


Using BigMouth – Registered user

Logging in to BigMouth

Open the URL <https://bigmouth.uth.edu/secure> in a web browser

For InCommons Federation Members - Select 'All Sites' under 'Group' section and select your respective organization under the under 'Organization' section. Click Select button. You will now be redirected to the Single Sign-On authentication page. Please use your organization's username and password to login.




THE UNIVERSITY of TEXAS SYSTEM
Nine Universities. Six Health Institutions. Unlimited Possibilities.

Select your home institution

The U.T. Houston CTSA service you are trying to reach requires that you authenticate with your home organization. Please either select it from the list below, then click 'Select', or you may use the search-as-you-type feature by typing a partial name into the search box below, then clicking 'Search'.

Please do not create a bookmark or favorite in your web browser on this page. This page is not part of the application you are accessing. You may create a bookmark/favorite after you complete the authentication process.

Enter organization name (partials ok):



Or choose from a list:

Group	Organization
U.T. System Institutions	Allegheny College
InCommon Federation	American University
All Sites	American University of Beirut
	Ames Laboratory
	Amherst College
	Argonne National Laboratory
	Arizona State University
	Auburn University
	Augsburg College
	Azusa Pacific University

Remember for session

Authentication Required

Please enter your Login ID (username or Friend ID) and password to continue.

Need a Login ID?

[Create a Login ID now.](#)

Important Security Tips

- U-M will **never** send you an email asking for your password. [Learn more about phishing scams.](#)
- Before entering your UMICH password (Level-1) on a web page, check that the page's web address/URL begins with *https://weblogin.umich.edu/*

By your use of these resources, you agree to abide by [Proper Use of Information Resources, Information Technology, and Networks at the University of Michigan \(SPG 601.07\)](#), in addition to all relevant state and federal laws.

Login ID

Password

▶ MToken

Log In

[Forgot your password?](#)
[Login Help](#)

BigMouth layout

i2b2 Query & Analysis Tool Project: COHRI UTH User: Krishna Kumar Kookal Find Patients | Analysis Tools | Help | Logout

Navigate Terms | **Find Terms**

- Axiom
 - UTH
 - Demographics - 245976
 - Diagnosis - 13192
 - Forms - 23809
 - Odontogram - 241905
 - Perio - 20573
 - Procedures - 113671
 - Providers
 - COHRI
 - Demographics - 1178716
 - Dental Procedures - 517288
 - Diagnosis - 125862
 - Forms - 124866
 - Odontograph - 193163
 - [Perio - 0]
 - [Providers - 0]

Navigate Terms Tab: Users can manually lookup for terms by browsing through the hierarchy.
Find Terms Tab: Search concepts using a word.

Query Tool

Query Name: Forms@09:45:41

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		
Forms - 23809								

one or more of these AND drop a term on here

Run Query Clear Print Query 1 Group New Group

Query Tool: Area where user build their question (query) by dragging and dropping concepts/terms from Navigate Terms/Find Terms tab.

Previous Queries

- Forms@09:45:41 [6-26-2012] [kkookal@uth.tmc.edu]
- Perio@09:37:38 [6-26-2012] [kkookal@uth.tmc.edu]
- ABNORMALITIES O@11:37:28 [6-21-2012] [kkookal@uth.tmc.edu]
- Bleedin-Age@12:54:33 [6-2-2012] [kkookal@uth.tmc.edu]

Previous Queries: Queries previously run by the logged in user.

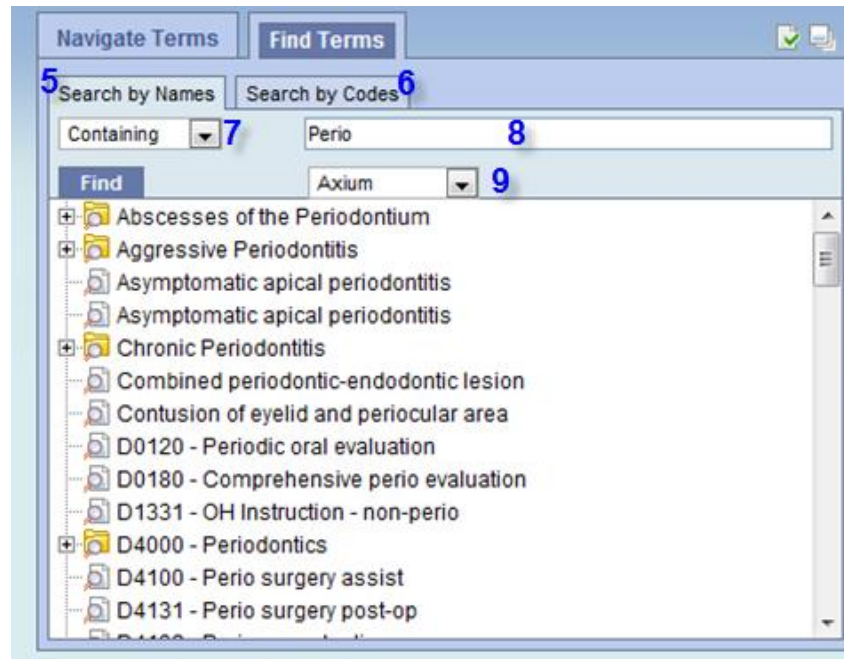
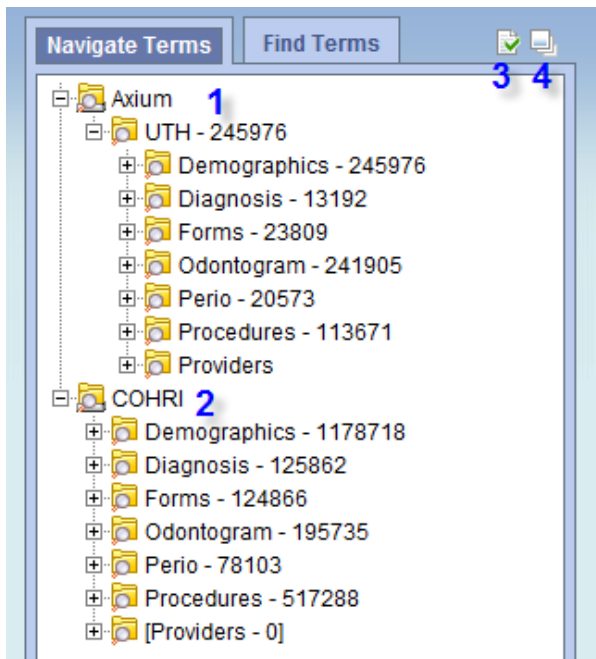
Query Status


Finished Query: "Forms@09:45:41" [17.0 secs]
 Compute Time: 14.7 secs

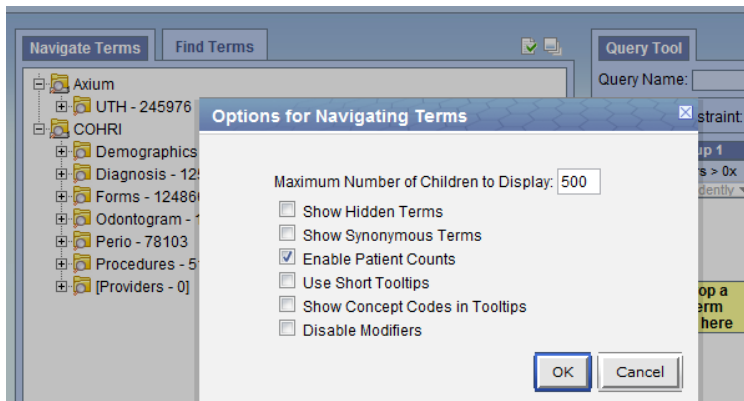
Number of patients for "Forms@09:45:41"
 patient_count: 23809


Query Status: User can view the status of the current query. Once the query completes its execution, the patient count and other details are displayed here.

1. Navigate Terms/Find Terms Section



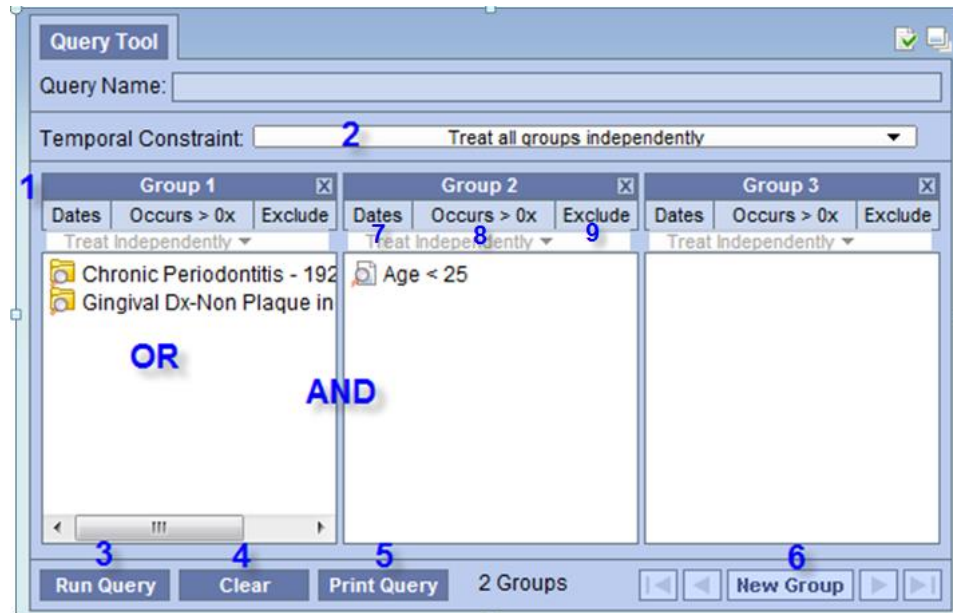
1. Site specific terminology: The axiUm node contains the site specific terminologies. Users can query for data available in axiUm at their own site. The number displayed adjacent to each folder/leaf node represents the number of patients.
2. COHRI terminology: This folder provides an integrated terminology system that allows users to query for data from more four schools
3. Options: Clicking on the  icon opens a small popup window (shown below) where users can customize the way the terms are displayed.



4. Expand: Clicking on the  icon expands the “Navigate Terms” section.
5. Search by Names: Users can use this tab to search terms by its name.
6. Search by Code: Users can search terms using their BigMouth code and description. These codes are different from the axiUm codes. These codes can be found by hovering over the terms.
7. Operators: User can use various operators while searching the term by name and code.
8. User can specify the search text in the space provided.
9. Users can specify whether they want to search in the site specific terminology or COHRI terminology.

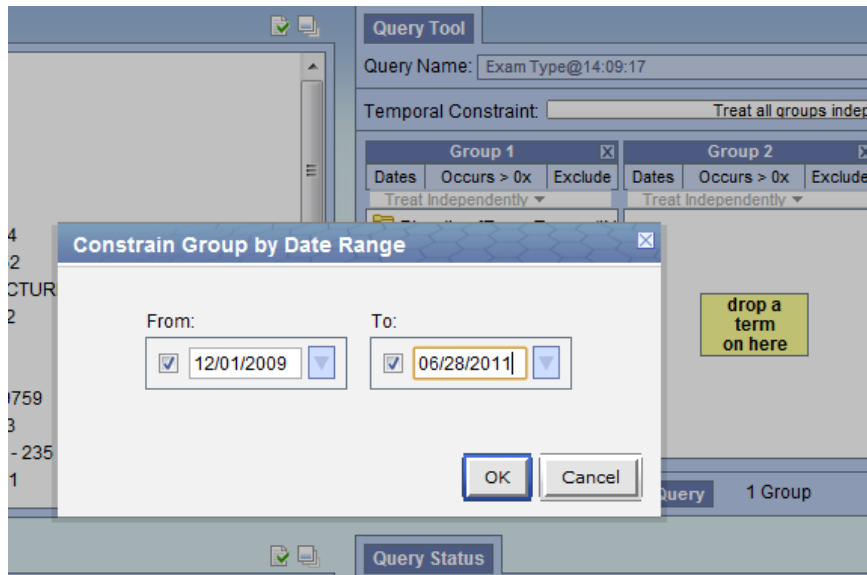
2. Query Tool Section

The query tool comprises of many groups where a user can specify the inclusion and exclusion criteria of patients.

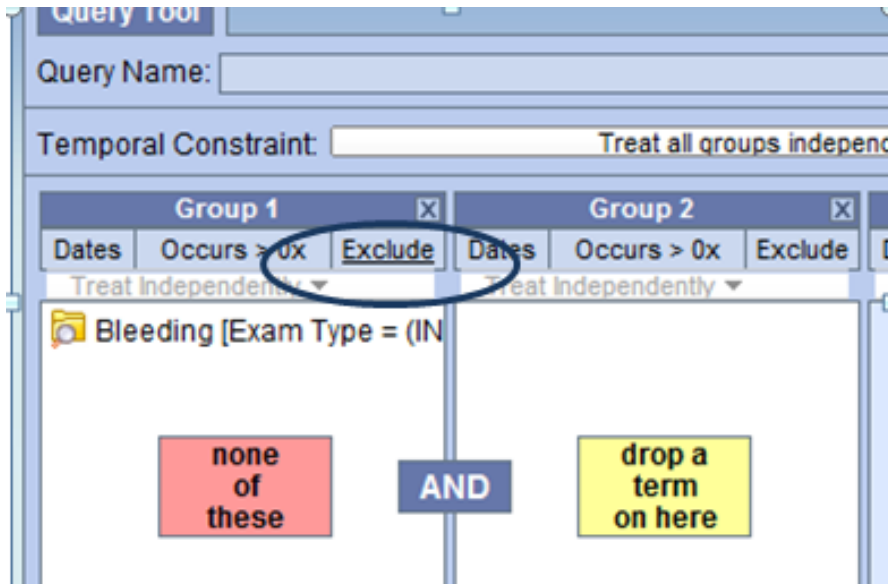


1. Groups: User can create as many groups as they like. A group can contain more than one term. A patient satisfying any one of the terms (conditions) in a group will be counted towards the final result. If more than one group is used, only patients satisfying conditions in all groups will be considered towards the final result. Users can add as many groups as required.
2. Temporal Constraint: This lets users specify if they would like to find patients from the same encounter. This feature is currently (as of June 2012) not supported in COHRI i2b2.
3. Run Query: Users can execute queries by clicking on the “Run Query” button.
4. Clear: Users can reset the content in the query tool by clicking on the “clear” button.

5. Print Query: Users can print the query for future reference by clicking on "Print Query" button.
6. New Group: Users can create new groups by clicking on "New Group" button.
7. Dates: Users can specify the date range of the encounters as shown below



8. This function is disabled
9. Exclude/Include: Users can exclude or include the terms in a group.



3. Previous Queries Section

Users can view a summary of previously run queries in the "Previous Queries" section. In order to view the complete details of the query, user can drag and drop the query to the "Query Name" area within the "Query Tool" section.

This screenshot shows a list of previously executed queries. The list includes:

- Exam Type@14:09:17 [6-26-2012] [kkookal@uth.tmc.edu]
- Results of Exam Type@14:09:17 [6-26-2012] [kkookal@uth.tmc.edu]
- Number of patients for "Exam Type@14:09:17" - FINISHED
- Odontogram@13:02:16 [6-26-2012] [kkookal@uth.tmc.edu]
- Forms@09:45:41 [6-26-2012] [kkookal@uth.tmc.edu]
- Perio@09:37:38 [6-26-2012] [kkookal@uth.tmc.edu]
- ABNORMALITIES O@11:37:28 [6-21-2012] [kkookal@uth.tmc.edu]
- Bleedin-Age@12:54:33 [6-2-2012] [kkookal@uth.tmc.edu]

The screenshot displays the 'i2b2 Query & Analysis Tool' interface. The top navigation bar includes 'Project: COHRI UTH', 'User: Krishna Kumar Kookal', and 'Find Patients | Analysis Tools | Help | Logout'. The main interface is divided into several sections:

- Navigate Terms / Find Terms:** A tree view on the left shows a hierarchy of terms under 'Axiom', including 'UTH - 245976', 'Demographics - 245976', 'Age - 57962', 'Gender - 245976', 'Diagnosis - 13192', and various dental conditions like 'ABNORMALITIES OF TEETH - 984', 'ANATOMIC ABNORMALITIES - 152', 'CARIES/LOSS OF TOOTH STRUCTURE - 6319', 'DEFECTIVE RESTORATION - 982', 'ENDODONTICS - 1302', 'HARMFUL ORAL HABITS - 169', 'NO TERM CAN BE ASSIGNED - 9759', 'OCCLUSION DISORDERS - 1193', 'ORAL PATHOLOGY/RADIOLOGY - 235', 'PAIN/ALTERED SENSATION - 351', and 'PERIODONTICS - 2559'.
- Query Tool:** The central area shows a query being constructed. The 'Query Name' field contains 'Exam Type@14:09:17 [6-'. The 'Temporal Constraint' is set to 'Treat all groups independently'. The query is structured into three groups:
 - Group 1:** Contains 'Chronic Periodontitis - 192' and 'Gingival Dx-Non Plaque in'. A green box indicates 'one or more of these'.
 - Group 2:** Contains 'Age < 25'. A green box indicates 'one or more of these'.
 - Group 3:** Contains a placeholder 'drop a term on here'. A yellow box indicates 'drop a term on here'.The groups are connected by 'AND' operators.
- Buttons:** 'Run Query', 'Clear', 'Print Query', and 'New Group' are visible at the bottom of the Query Tool.
- Previous Queries:** A list at the bottom left shows the same set of queries as the first screenshot.
- Query Status:** A panel at the bottom right shows the status of a finished query: 'Finished Query: "ABNORMALITIES O@11:37:28" [2.7 secs]'. Below it, the results are displayed: 'Number of patients for "ABNORMALITIES O@11:37:28" patient_count: 2218±3'.

How to run a query?

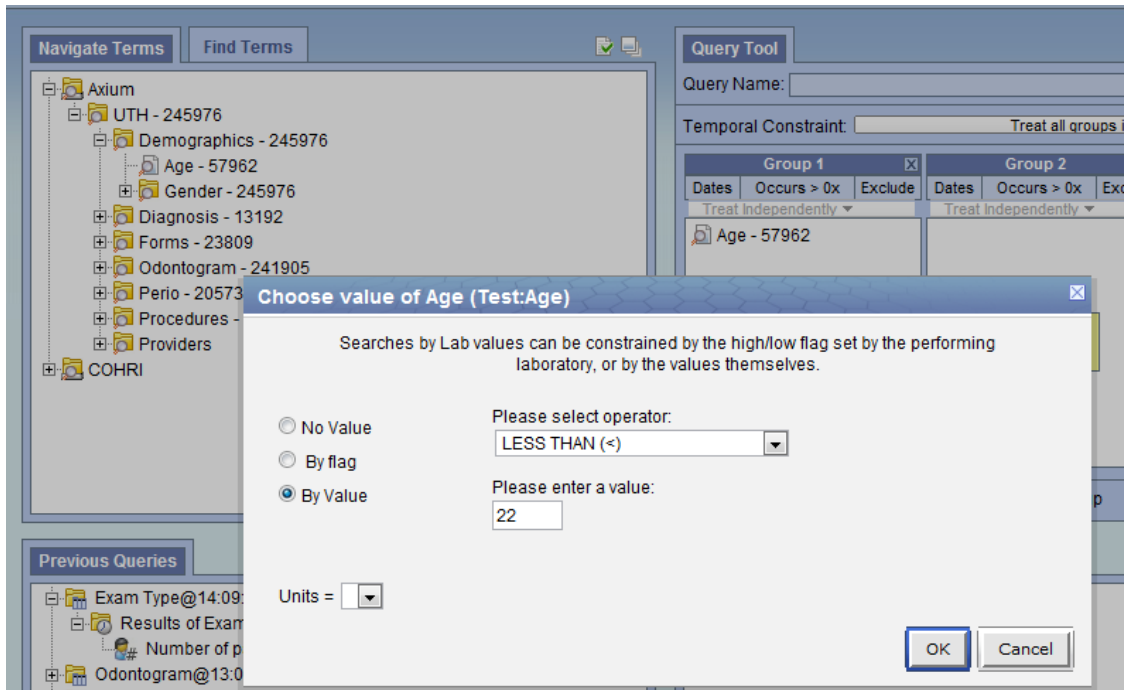
STEP 1: Identify the concept(s)/term(s) from the "Navigate Terms" section

STEP 2: Drag and drop the selected term to a group in the "Query tool" section. Specify date range, exclusion criterion as needed.

The screenshot displays a software interface for building queries. It is divided into several panels:

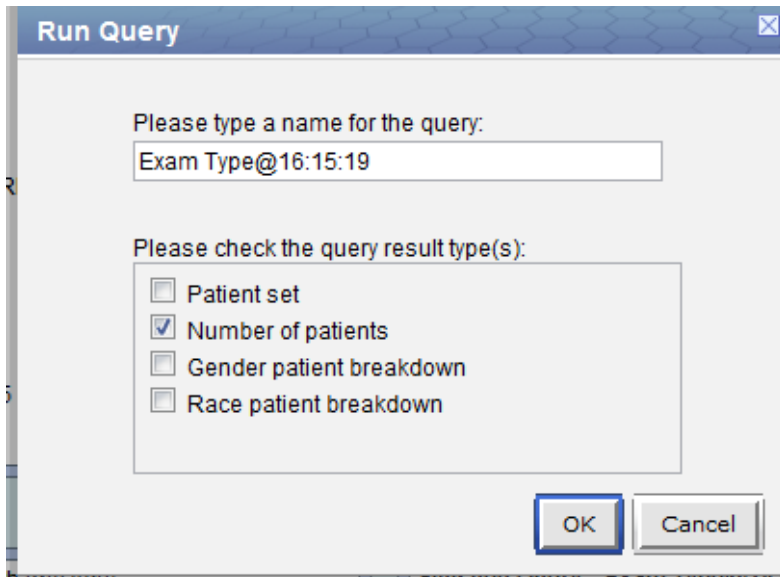
- Navigate Terms:** A tree view showing a hierarchy of terms. The root is 'Axiom', followed by 'UTH - 245976', 'Demographics - 245976', 'Age - 57962', 'Gender - 245976', 'Diagnosis - 13192', 'ABNORMALITIES OF TEETH - 984', and 'ANATOMIC ABNORMALITIES - 152'. Under 'ABNORMALITIES OF TEETH - 984', there are sub-terms like 'Cementum Defect - 23', 'Dentin Defect - 40', 'Enamel and Dentin Defect - 163', etc.
- Query Tool:** A central workspace for building queries. It has a 'Query Name' field, a 'Temporal Constraint' dropdown set to 'Treat all groups independently', and three groups (Group 1, Group 2, Group 3). Each group has a 'Dates', 'Occurs > 0x', and 'Exclude' section. Group 1 contains 'Age < 22'. Group 2 contains 'ABNORMALITIES OF TEETH' and 'Dentin Defect - 40'. Group 3 is empty. The groups are connected by 'AND' operators. There are green boxes with the text 'one or more of these' and a yellow box with 'drop a term on here'.
- Previous Queries:** A list of previously executed queries, including 'Exam Type@14:09:17 [6-26-2012] [kkookal@uth.tmc.edu]', 'Results of Exam Type@14:09:17 [6-26-2012] [kkookal@uth.tmc.edu]', 'Odontogram@13:02:16 [6-26-2012] [kkookal@uth.tmc.edu]', 'Forms@09:45:41 [6-26-2012] [kkookal@uth.tmc.edu]', 'Perio@09:37:38 [6-26-2012] [kkookal@uth.tmc.edu]', 'ABNORMALITIES O@11:37:28 [6-21-2012] [kkookal@uth.tmc.edu]', and 'Bleedin-Age@12:54:33 [6-2-2012] [kkookal@uth.tmc.edu]'.
- Query Status:** A panel for displaying the status of the current query.

Modifiers can be added to certain terms. A popup window is displayed when such terms are added to the "Query Tool" section. For example, when querying for age, users can specify the operator and the value (example shown below).



STEP 3: Click on the Run Query button

STEP 4: Specify the format of the result in the small popup window that appears after clicking on "Run Query" button. Please note that the "Patient Set" option is not available to all users.



Step 5: View results in the "Query Status" section

Finished Query: "Perio@16:18:11"

Compute Time: 7.5 secs

Patient Set for "Perio@16:18:11"

Race patient breakdown for "Perio@16:18:11"

American Indian or Alaska Native: 61

Asian: 1231

Black or African American: 2675

Some Other Race: 4185

White: 6525

Gender patient breakdown for "Perio@16:18:11"

Female: 11940

Male: 8062

Others: 2

Unknown: 569

Number of patients for "Perio@16:18:11"

patient_count: 20573

Example Query

How many patients ages 45 and older have been diagnosed with chronic periodontitis and a cardiovascular condition?

Navigate Terms

- Axiom
 - UTH - 245976
 - Demographics - 245976
 - Age - 57962
 - Gender - 245976
 - Diagnosis - 13192
 - ABNORMALITIES OF TEETH - 984
 - ANATOMIC ABNORMALITIES - 152
 - CARIES/LOSS OF TOOTH STRUCTURE - 6319
 - DEFECTIVE RESTORATION - 982
 - ENDODONTICS - 1302
 - HARMFUL ORAL HABITS - 169
 - NO TERM CAN BE ASSIGNED - 9759
 - OCCLUSION DISORDERS - 1193
 - ORAL PATHOLOGY/RADIOLOGY - 235
 - PAIN/ALTERED SENSATION - 351
 - PERIODONTICS - 2558
 - REMOVABLE PROSTHODONTICS - 1111

Number of patient having information regarding this

Query Tool

Query Name: Age-Chron-073 -@12:42:11

Temporal Constraint: Treat all groups independently

Group 1		Group 2		Group 3	
Dates	Occurs > 0x	Dates	Occurs > 0x	Dates	Occurs > 0x
	Exclude		Exclude		Exclude
Treat Independently		Treat Independently		Treat Independently	
Age > 45		Chronic Periodontitis - 192		073 - YES-Infective endoc...	
		Generalized Modera...		074 - YES-Coronary artery	
		Generalized Severe		075 - YES-Heart attack - 59	
		Generalized Slight C...		078 - YES-Congestive hea	
		Localized Moderate		079 - YES-Hypertension - 5	
		Localized Severe Ch...		080 - YES-Atrial fibrillation	
		Localized Slight Ch...		081 - YES-Heart block - 20	
		Peri-implantitis		083 - YES-Pacemaker/Imp	
		Periodontosis		082 - YES-Cardiac arrythm	
		Refractory Periodon...		084 - YES-Rheumatic feve	
				085 - YES-Heart murmur -	
				086 - YES-Mitral valve prola	
				087 - YES-Deep vein throm	
				088 - YES-Stroke (CVA) or	
				096 - YES-Shortness of bri	
				097 - YES-Shortness of br	
				098 - YES-Palpitations - 77	
				099 - YES-Angina/Chest p	
				100 - YES-Dizziness/Light	
				101 - YES-Swelling of the	

OR

AND

one or more of these

AND

one or more of these

AND

one or more of these

Run Query Clear Print Query 3 Groups New Group

Query Status

Finished Query: "Age-Chron-073 -@12:42:11" [43.6 secs]
Compute Time: 41.6 secs

Number of patients for "Age-Chron-073 -@12:42:11"
patient_count: 586

Note: a common question regarding patient count: why the patient counts don't add up?

