

## DEFINED COHORT

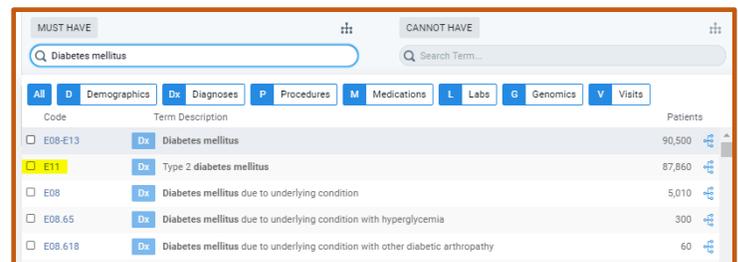
Stony Brook patients age 50 or older with a history of Type 2 Diabetes and who have been admitted to the hospital for cellulitis in the years 2016-2019

## BUILD THE QUERY

Try following along with these steps in TNX to become familiar with building a query. Please also refer to the Tip Sheet "Building Queries".

1. **Set the Network:** Choose Stony Brook University
2. **Set the Age/Sex:** Enter 50 years and older, any sex
3. **Add relevant Terms to the query using the Must Have search field:**

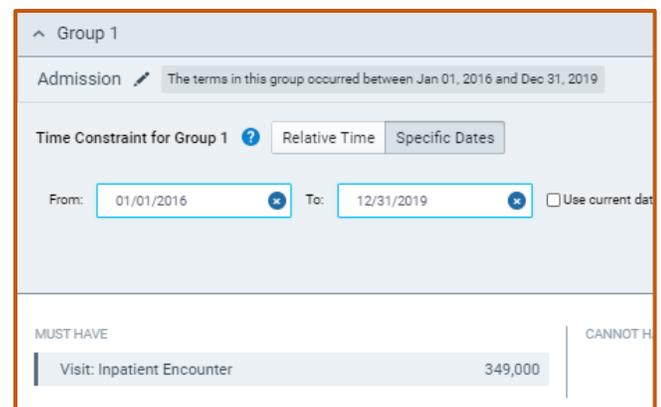
- Type 2 diabetes mellitus (E11)
- Cellulitis and acute lymphangitis (L03)
- Visit: Inpatient Encounter



4. **Create constraints for time**

Create a New Group (Group 1) and add Terms for Inpatient. Then click to add a Time Constraint and enter specific dates –

1/1/2016 - 12/31/2019



## 5. Connect the diagnosis of cellulitis with the hospital admission

Relate the cellulitis diagnosis to the hospital admission.

Click on Related Group in Group 1. In this new box, add that term for cellulitis. Now you see we have 1A and 1B boxes in Group 1.

Set the Relationship between the cellulitis and the admission, so that any instance of 1B occurred within 3 days before and up to 1 week before any instance of 1A.

The screenshot shows the TrinetX interface for configuring a relationship between two groups. The top section is for Group 1A, 'Admission', with 349,000 instances. It includes a 'MUST HAVE' section with 'Visit: Inpatient Encounter' and '1013659 Hospital Inpatient Services' (10,070 instances). The bottom section is for Group 1B, 'Cellulitis', with 45,210 instances. The relationship configuration is set to 'Any instance of Group 1B occurred within 3 days before or up to 1 week after any instance of Group 1A'. The timeline shows 'Group 1A' at the center, with '3 Days Before' and '1 Week After' markers. The 'From' field is set to 3 Days Before and the 'To' field is set to 1 Week After. There are 'Save' and 'Cancel' buttons at the bottom right of the relationship configuration area.

By creating this relationship, we attempt to exclude patients who had an admission to the hospital for another reason other than cellulitis.

## 6. Demonstrate a history of Diabetes Type 2

First, you will need to search terms and re-select and re-add the term for "Cellulitis and acute lymphangitis" to the query AGAIN, as this time, we want to show that the patients who were diagnosed with cellulitis had a history of diabetes.

Create another Group (Group 2), add the term for "Cellulitis and acute lymphangitis", and make the same Time Constraint for this group for 1/1/2016 - 12/31/2019.

Relate the diabetes 2 diagnosis to cellulitis by clicking on Related Group in Group 2. In this new box, add the term for "Type 2 diabetes mellitus". Now you see we have 2A and 2B boxes in Group 2.

Set the Relationship between the "Cellulitis and acute lymphangitis" and the "Type 2 diabetes mellitus", so that any instance of 2B occurred no later than 1 day before any instance of 2A.

The screenshot displays the TRINETX interface for configuring a relationship between two groups within a study. The main window is titled "Group 2" and contains two sub-groups: "2A Cellulitis" and "2B Diabetes Dx".

- Group 2A (Cellulitis):** Contains the term "L83 Cellulitis and acute lymphangitis" with 45,210 instances.
- Group 2B (Diabetes Dx):** Contains the term "E11 Type 2 diabetes mellitus" with 87,860 instances.

The relationship configuration section is titled "Set a Relationship between 2A (Cellulitis) and 2B". It includes the following details:

- Relationship Description:** "Any instance of Group 2B occurred at least 1 day before any instance of Cellulitis".
- Group 2A Selection:** "Any instance" is selected.
- Group 2B Selection:** "Any instance" is selected.
- Timeline:** A horizontal timeline shows the relationship starting at "1day" before the "Same Day" point.
- From/To Settings:** "From" is set to "∞" (infinity) and "To" is set to "1" (one).
- Units and Direction:** The unit is "Days" and the direction is "Before".

Buttons for "Save" and "Cancel" are visible at the bottom right of the configuration section.

By creating this relationship, we ensure that patients already had a diagnosis of Type 2 diabetes prior to any occurrence of cellulitis in their record.

7. Last step! Click Count Patients!

