EXAMPLE DIABETES STUDY IN TRINETX

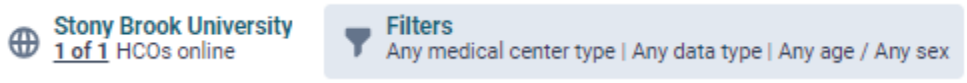
DEFINED COHORT

Stony Brook patients who were admitted to our hospital in the years 2016-2019 for a cellulitis diagnosis at the age of 50 or older and who had a history of Type 2 Diabetes

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".

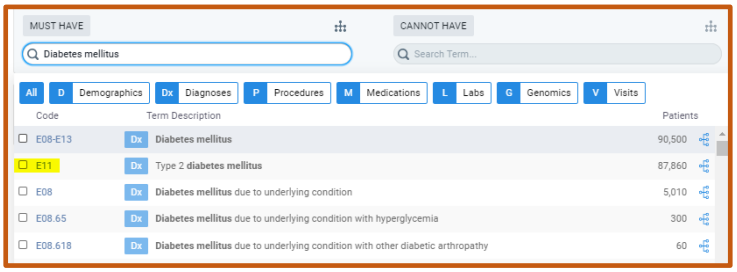
1. **Set the Network:** Choose Stony Brook University



Note about Filters - Age & Sex: We will not be using this age filter at the top of the Query Builder because it filters for patients aged 50 or older *on the date you run your query*, not at the time the patient was admitted with a diagnosis of cellulitis. This filter is great for recruitment, but not for retrospective research.

2. **Add relevant Terms to the query using the Must Have search field:**

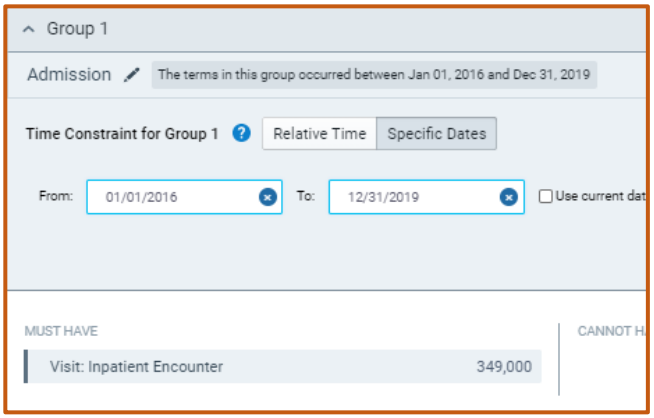
- Type 2 diabetes mellitus (E11)
- Cellulitis and acute lymphangitis (L03)
- Visit: Inpatient Encounter



3. **Create constraints for time**

Create a New Group (Group 1) and add Terms for Inpatient Admission. Name your group Admission. Then click Group Rules and choose to add a Time Constraint and enter specific dates –

1/1/2016 - 12/31/2019

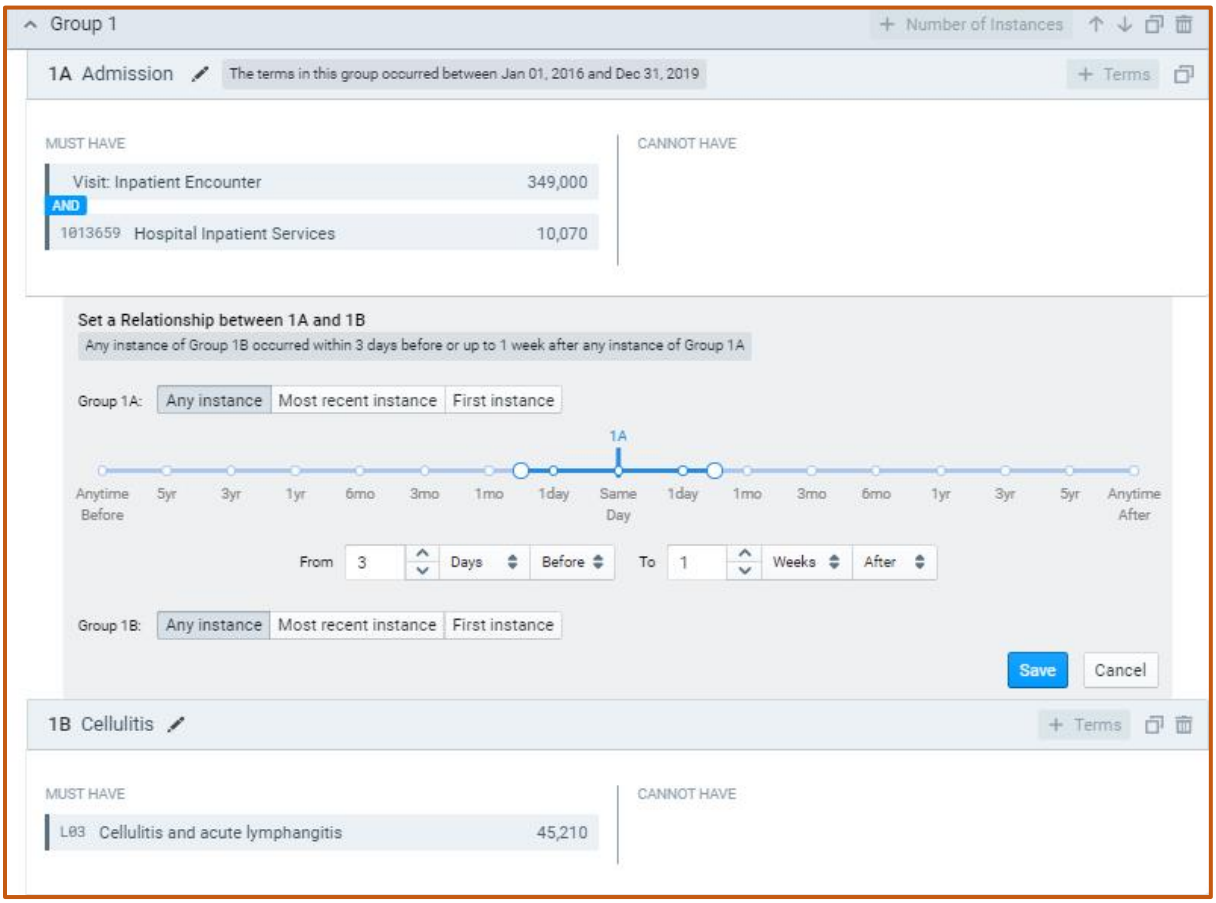


4. **Relate the diagnosis of cellulitis to the hospital admission**

   Click on Group Rules, then 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. Name your 1B box Cellulitis.

   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.

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



5. **Demonstrate a history of Diabetes Type 2**

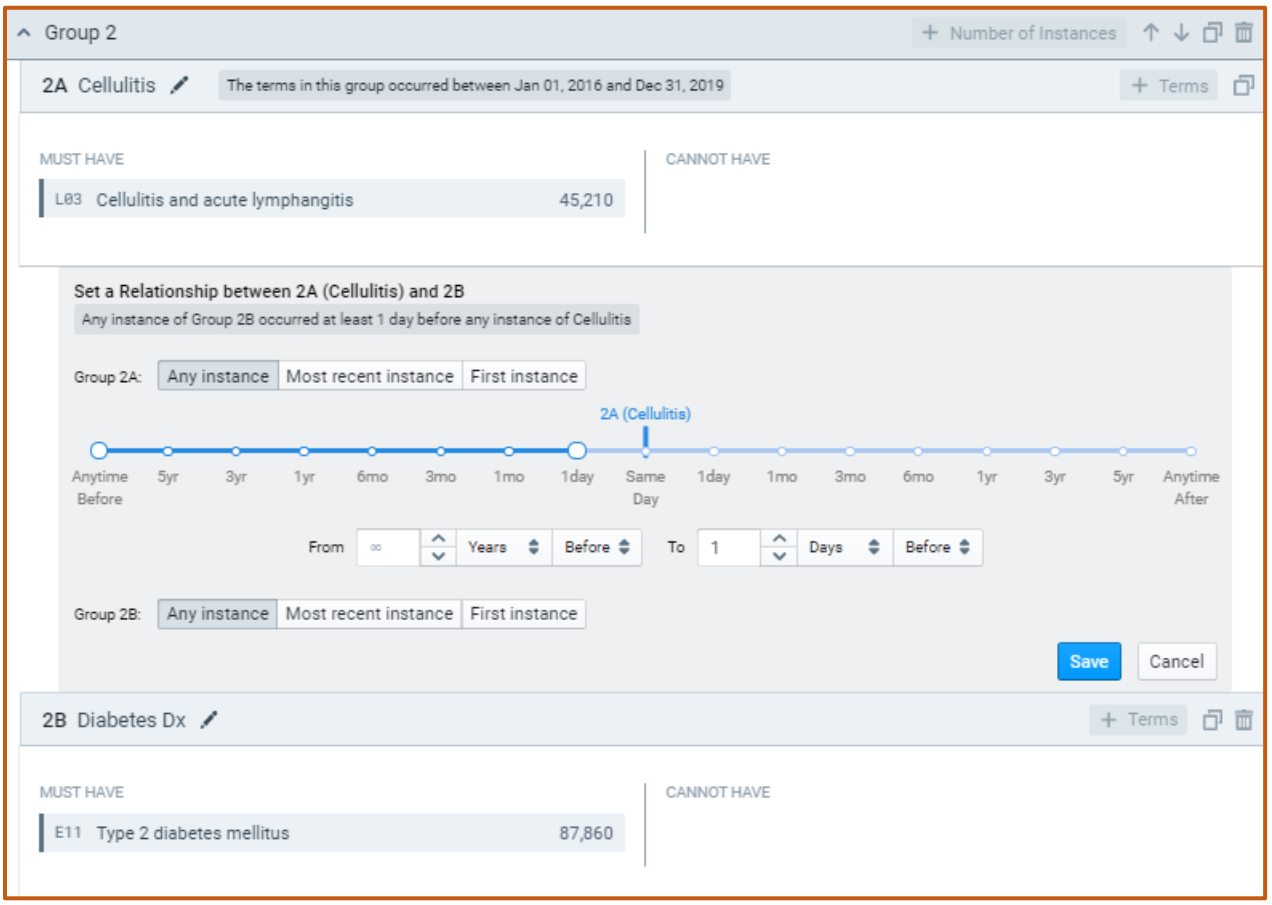
   First, you will need to search terms and re-select and re-add the term for "Cellulitis and acute lymphangitis" to the query AGAIN, as this time, we want to show that the patients who were diagnosed with Cellulitis had a history of diabetes.

   Create another Group (Group 2), add the term for "Cellulitis and acute lymphangitis". Click on Group Rules, then make the same Time Constraint for this group for 1/1/2016 - 12/31/2019. Name your 2A box Cellulitis.

Relate the Diabetes Type 2 diagnosis to Cellulitis by clicking on Group Rules, then add a 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. Name your 2B box Diabetes Type 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.

By creating this relationship, we ensure that patients already had a diagnosis of Type 2 Diabetes prior to any occurence of Cellultis in their record.



6. **Set an Age parameter on the Cellulitis diagnosis.**
   Click on the funnel in both terms for Cellulitis. Hover over the term to see the funnel shape, and click to set greater than or equal to 50 years.

7. **Last step! Click Count Patients!**