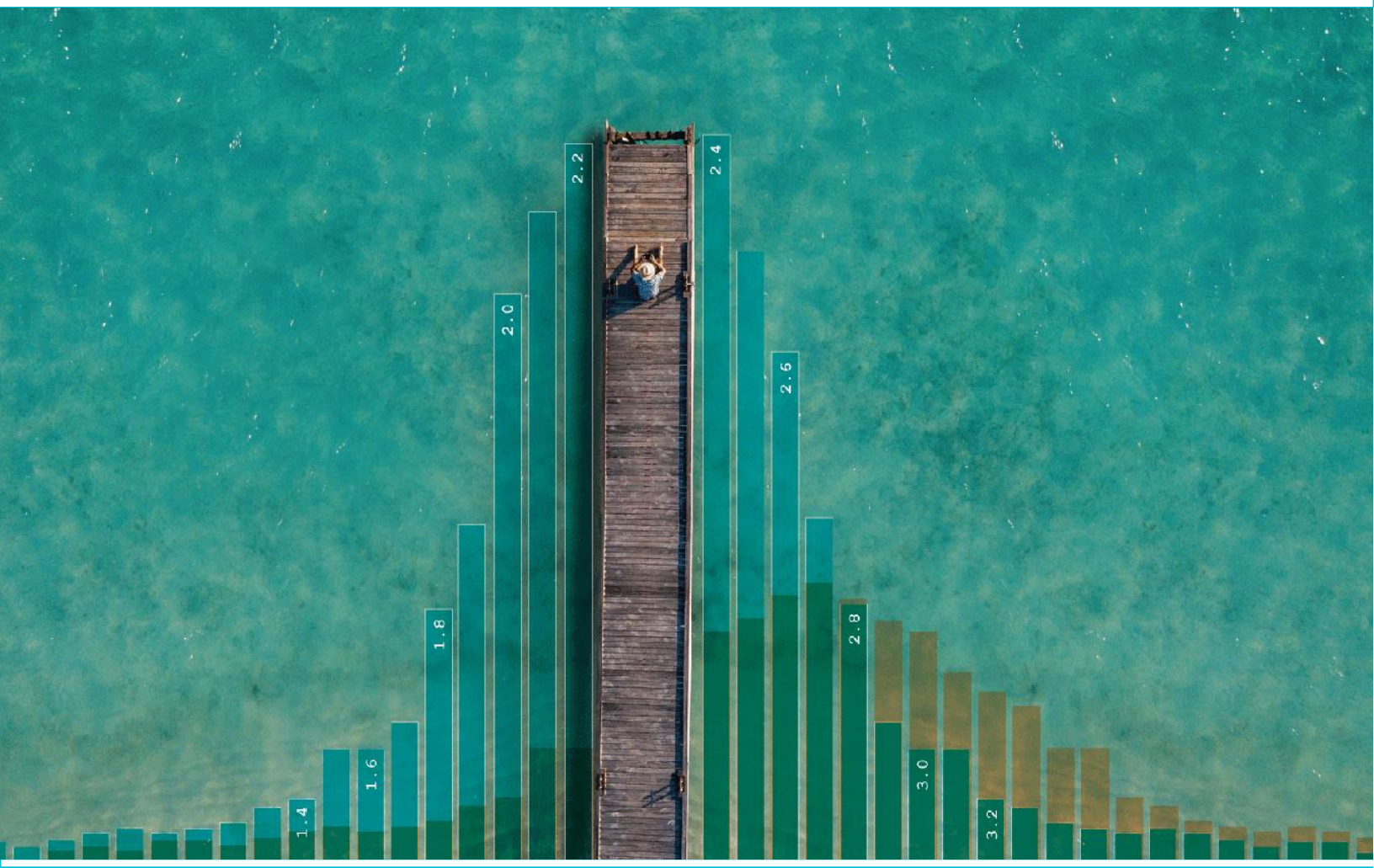
TriNetX Explore real world, real-time global data



TriNetX 101 Training Guide: Intro to TriNetX LIVE™, Studies, Networks, and Query Builder

December 2024

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LOGGING IN

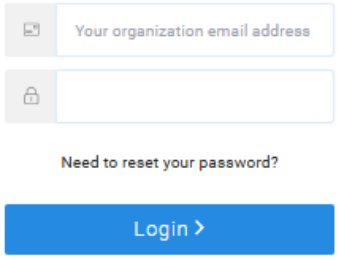
LOGGING IN TO TRINETX LIVE ™

TriNetX is a data company and offers **software as a service** (SaaS). A SaaS application is one accessed via the internet and does not require downloading or installing software or hardware. TriNetX manages access to its application, including its security, availability, and performance. An **application** is software that a user interacts with to complete a specific task. A **platform** includes both the software and the hardware on which applications run. TriNetX LIVE™ is the software that users leverage to count patients and run analyses within their internet browser, and TriNetX LIVE™ is the ecosystem of software and hardware that constitute the TriNetX network.

To log in to the TriNetX LIVE™ users go to **live.trinetx.com** in their internet browser. **Google Chrome** is the only browser that TriNetX builds and tests software for.

TriNetX permits federated authentication, allowing users to access multiple applications with a single username and password. This means that most users can log in to TriNetX using their computer or organization username and password.

Resetting Passwords



To reset their password, users can click the **Need to reset your password?** link from the TriNetX login page (**live.trinetx.com**).

Users can then enter the email that is associated with the TriNetX account and click **Send email.**

If the user doesn't receive an email, they should check the email's spam/junk folder.

Troubleshooting tip #1 – Application interface issues

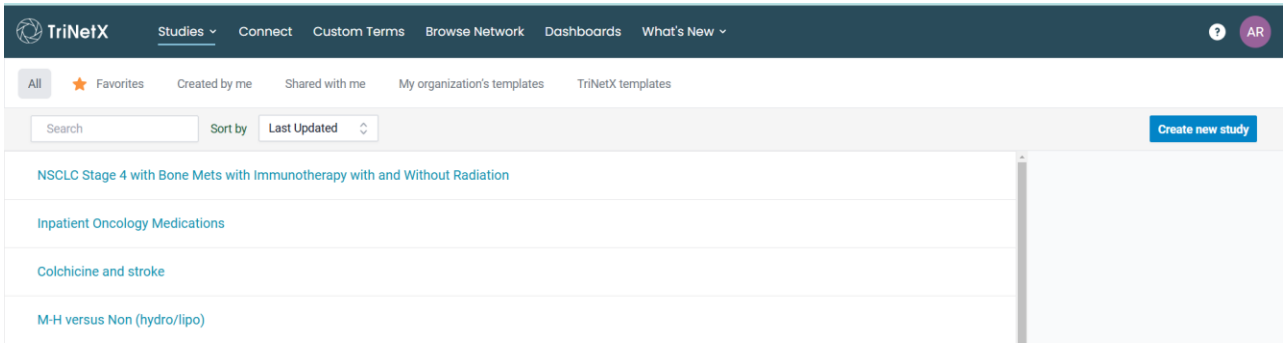
If the application interface is not functioning as expected, stuck on the loading page, or experiencing an issue with user agreement, users can try clearing the browser's cache. The cache in Google Chrome can be cleared by:

1. Clicking the Tools menu (three stacked dots in the right-hand corner)
2. Click More tools > Clear browsing data
3. At the top, the user is prompted to choose a time range. To delete everything, select All time.
4. Check the boxes next to Cookies and other site data and Cached images and files
5. Click Clear data

Users will need to allow and accept third party cookies from TriNetX. If a user receives an error message that the system is unable to configure the verification page or if the user is kicked out of the application immediately after logging in, the user should check that they allow and accept third party cookies from TriNetX in their browser settings. It is important that the user does not have an application or extension (such as Privacy Badger) blocking third-party cookies from TriNetX.

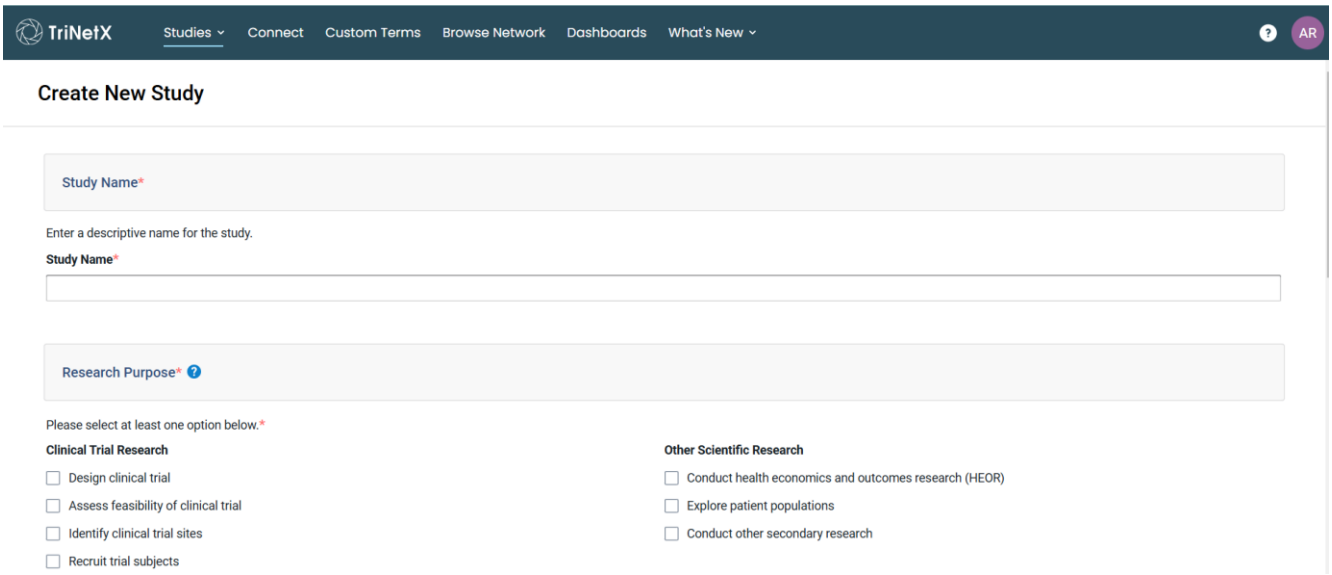
CREATING A STUDY

After logging in to TriNetX LIVE™, users are brought to the My Studies page.



The **My Studies** page shows studies that have been created by the user or shared with the user. Users can search by study name and can filter for all studies, studies marked as favorites, studies created by the user, studies shared with them, as well as their organization's and TriNetX templates. A **study** contains the queries that users create. A **query** is a single cohort of patients.

To create a new study, click the blue **Create New Study** button in the upper right-hand corner of the My Studies page.

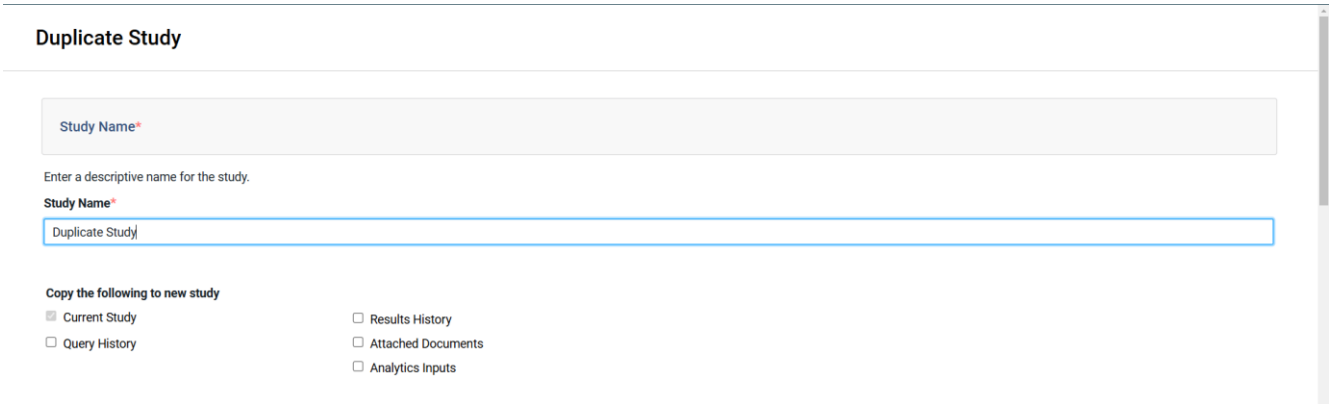


To create a study, users need to include at least the name, the research purpose, and the primary therapeutic area. The study name can be anything the user chooses, but some suggestions include the protocol title, date, or a client code. The research purpose selections are divided by clinical trial research and other scientific research. The user should choose the purpose(s) that best fits their use case. Often when users are working in a protocol feasibility, protocol design, or site identification role, they will choose the clinical trial research purposes. When users are using TriNetX to run real-world evidence analyses or download datasets, they are working within the other scientific research purposes. The purpose selection will not affect the network, features, or analytics that users have access to.

After the research purposes, there are three optional other fields: study identifying information, target population and study protocol. These sections do not need to be filled in to create a study (other than the Primary Therapeutic Area in the Target Population section). For users that engage with the healthcare organizations through TriNetX Connect, filling in these fields will automatically send the appropriate responses and information into TriNetX Connect.

Once the Create New Study page has been filled out, users need to click the blue **Create** button at the end of the page to create the new study.

Users can duplicate studies they have created or studies that have been shared with them from the My Studies page by clicking the Duplicate button on the right for a study.



For duplicating studies, users need to select which data to duplicate:

- **Current Study:** duplicate the most recently run query.
- **Query History:** duplicate all the queries in the Query History, but not the patient counts or base analytic results.
- **Results History:** duplicate the patient counts and base analytic results from the original study.
- **Attached Documents:** include documents from the Documents tab within Study Management of the original study.
- **Analytics Inputs:** duplicate analyses and their inputs (but not their results) from the Advanced Analytics.

NETWORKS

What is a network? At TriNetX, a network is a set of healthcare organizations united by geography, care specialty, or research mission. There are two main sources of health data in TriNetX: **electronic health record (EHR)** and **claims data**. Within the EHR networks at TriNetX, data often includes structured clinical characteristics such as diagnoses, procedures, lab tests, and other services from health care providers. TriNetX has many EHR networks which will be described in the next section. Claims data are administrative data containing doctors' appointments, bills, insurance information, and other patient-provider communications. TriNetX also has a network that combines EHR and closed claims. Closed claims come from health insurance providers (payers).

EHR networks

TriNetX's EHR data comes from **healthcare organizations** (HCOs). An HCO is a collection of centers that provide health services. TriNetX LIVE™ is accessible to users at these HCOs, as well as subscribing customers throughout the industry such as, pharmaceutical, CROs, biotechnology, and public health organizations.

HCO users have access to networks that are different from Industry users. HCO users often have access to their own self-network, and several other networks. These may include:

- Research Network: which is a scientific network that is optimized for RWE research. This network does not have a path back to the HCO or patients. Therefore, HCOs remain anonymous and enable users to see exact patient counts. Note that any counts under 10 will still be rounded up to the next 10 to protect patient privacy. This network permits de-identified dataset downloads. Dataset requests are managed differently at each HCO. To learn more about the unique process at a given HCO, it is recommended to contact the TriNetX Healthcare Partnership Manager for the organization.
- Specialty Collaborative Networks: these are created when two or more HCOs agree to pool their de-identified data in a way that attributes HCO source to the patients that make up a cohort. These networks **do not** permit dataset downloads.
- Regional Collaborative Networks: these are specifically for HCOs to anonymously pool their de-identified data. This enables HCO users to access a broader patient population and leverage the TriNetX LIVE™ Analytics. These networks **do not** permit dataset downloads.

Industry users have access to different networks based on their subscription. These may include:

- Dataworks Networks: which are scientific networks optimized for RWE research. This network does not have a path back to the HCO or patients. Therefore, it provides exact patient counts. Note that any counts under 10 will still be rounded up to the next 10 to protect patient privacy. This network permits de-identified dataset downloads. Datasets must be requested and contracted through the organizations TriNetX Account Manager.

- Regional Networks: these networks are optimized for clinical trial protocol feasibility, protocol optimization, site selection, and site outreach. These networks do maintain a path back to the HCO and patients. To add a layer of patient privacy these networks round up all patient counts to the nearest 10. These networks **do not** permit dataset downloads.

    - It is important to understand that industry clients are not able to query for a single HCO.

In addition to these EHR data networks., there is one network that integrates EHR data with closed medical claims, pharmacy claims and mortality databases:

- Linked Network: Both HCO and Industry users may have access to the Linked Network. Linked includes data from HCOs that allow their patients to be tokenized for linking to claims data and is a combination of EHR and Closed Claims data. HCOs are anonymous on this network and there is no path back to the HCO or patients. This network permits users to leverage the TriNetX LIVE™ Analytics and request de-identified dataset downloads.

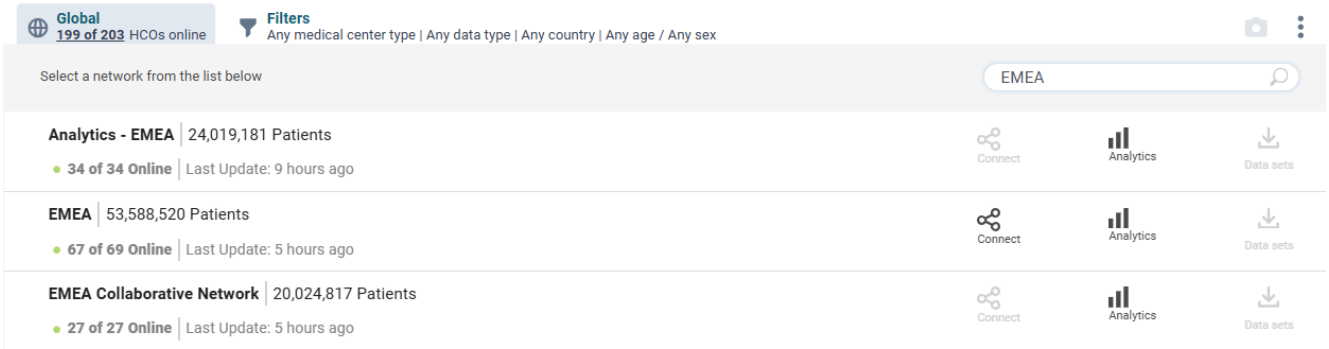
    - Dataset requests are managed differently at each HCO. To learn more about the unique process at a given HCO, it is recommended to contact the TriNetX Healthcare Partnership Manager for the organization.

    - Industry users must contact their TriNetX Account Manager to inquire about dataset downloads.

For more information about the differences among Networks, please visit these Help Center articles: What are the differences between TriNetX Networks?

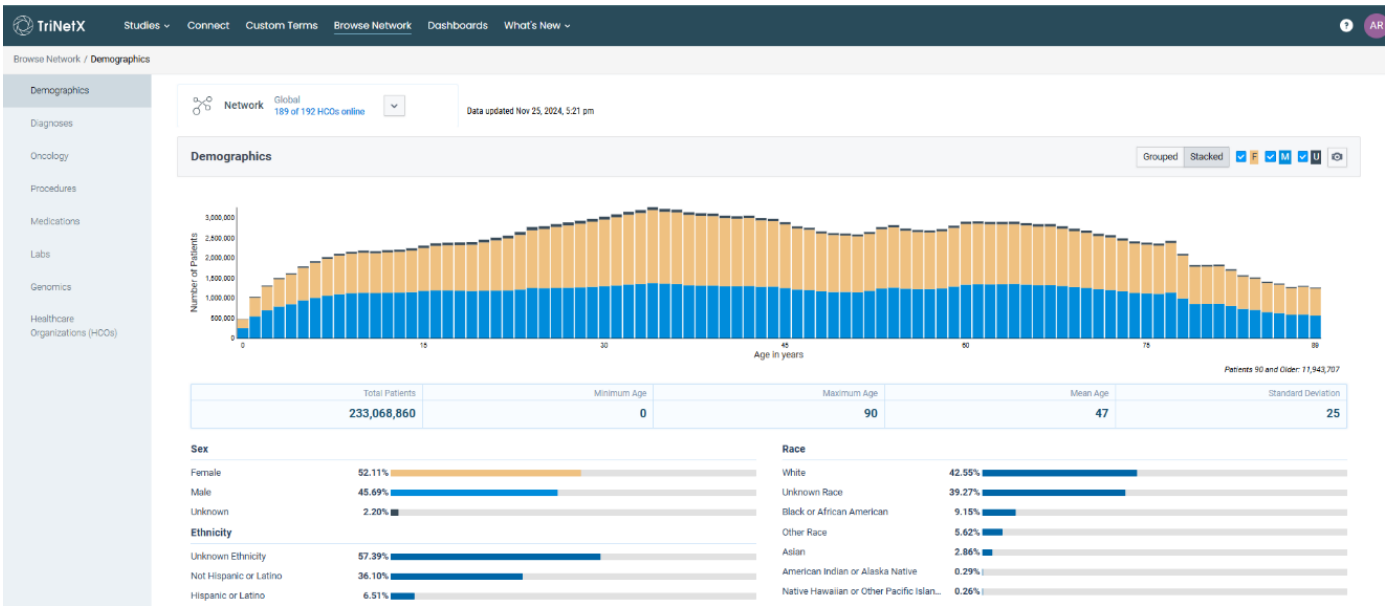
Selecting a Network

When a user creates a new study, the Query Builder will default to a random network that the user has access to. To toggle between networks, click the name of the default network, which will pull up the list of available networks:



From the network selection, users will be able to see how many patients across all therapeutic areas and timepoints are queryable on that network, how many HCOs are part of the network and online, and whether the network permits Connect, Advanced Analytics, or dataset downloads. TriNetX's EMR networks are **dynamic networks**, meaning that new HCOs and patients are constantly joining the network. As TriNetX is a live ecosystem, HCOs will occasionally and temporarily go offline to refresh their data or perform maintenance.

To view the demographics, clinical characteristics, and HCOs (when applicable) for an entire network, users can click the **Browse Network** tab at the top of the application:



HEALTHCARE ORGANZIATIONS (HCOS)

What is an HCO?

Healthcare systems are referred to as Healthcare Organizations (HCOs) at TriNetX. Each HCO meets the following criteria:

- Health setting that treats patients
- Has an electronic health record system
- May sometimes do research and conduct clinical trials

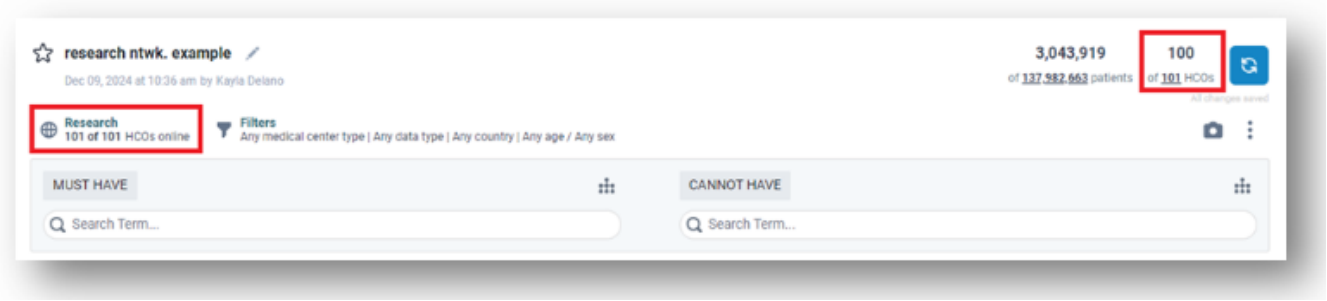
Each HCO has a primary location that is listed as the parent HCO within TriNetX LIVE™. HCOs often have multiple, and even hundreds of different addresses that treat patients. These additional "points of care" locations (e.g., a hospital or physician's office) underneath the parent HCO are referred to as Sites at TriNetX. The parent HCO is what is included in any HCO calculation visible within TriNetX LIVE™. These HCO counts do not include the totality of sites that exist under any given parent HCO. Please note, not all HCOs provide location data at the site level. Additionally, users at HCOs that provide location data have the ability to query at the facility level in their "self-network." These facilities are not included in the tabulation of HCO counts.

Below are several reasons why an HCO may show an interest in joining the TriNetX community:

- To increase pharmaceutical and CRO visibility of their organization for clinical trial site selection
- To improve their own clinical trial feasibility process
- To improve their own patient identification and recruitment process
- To gain access TriNetX LIVE™ along with publication ready data from the world's largest, living ecosystem of global EHR real-world data.

Within TriNetX LIVE™ users will see HCO counts within the Query Builder in a couple areas described below:

1. Under the Network title in the top-left corner of the Query Builder workspace
2. To the right of each patient count which is located in the top-right corner of the Query Builder workspace



BUILDING A QUERY

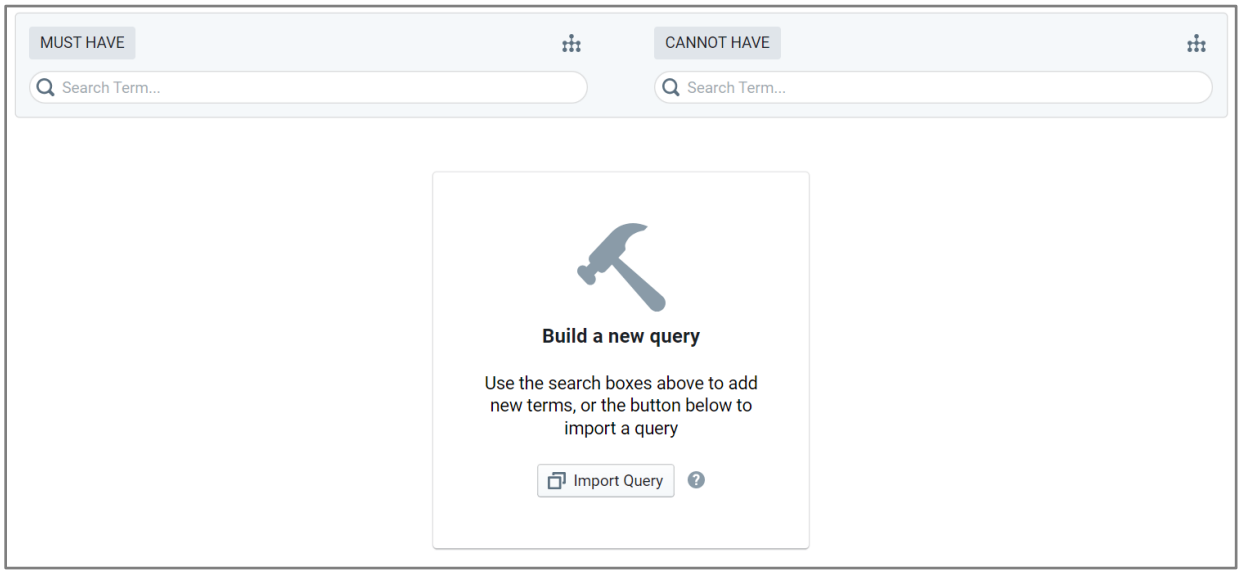
Query Builder

Users will use the Query Builder to translate their inclusion criteria (characteristics that prospective subjects must have if they are to be included in the study) and exclusion criteria (characteristics that disqualify prospective subjects from inclusion in the study), or define their patient populations within their study. Building a query is the most fundamental task in the TriNetX application; it is the first step to counting patients, generating demographic and clinical characteristics, running analyses, and for industry users: engaging with healthcare organizations.

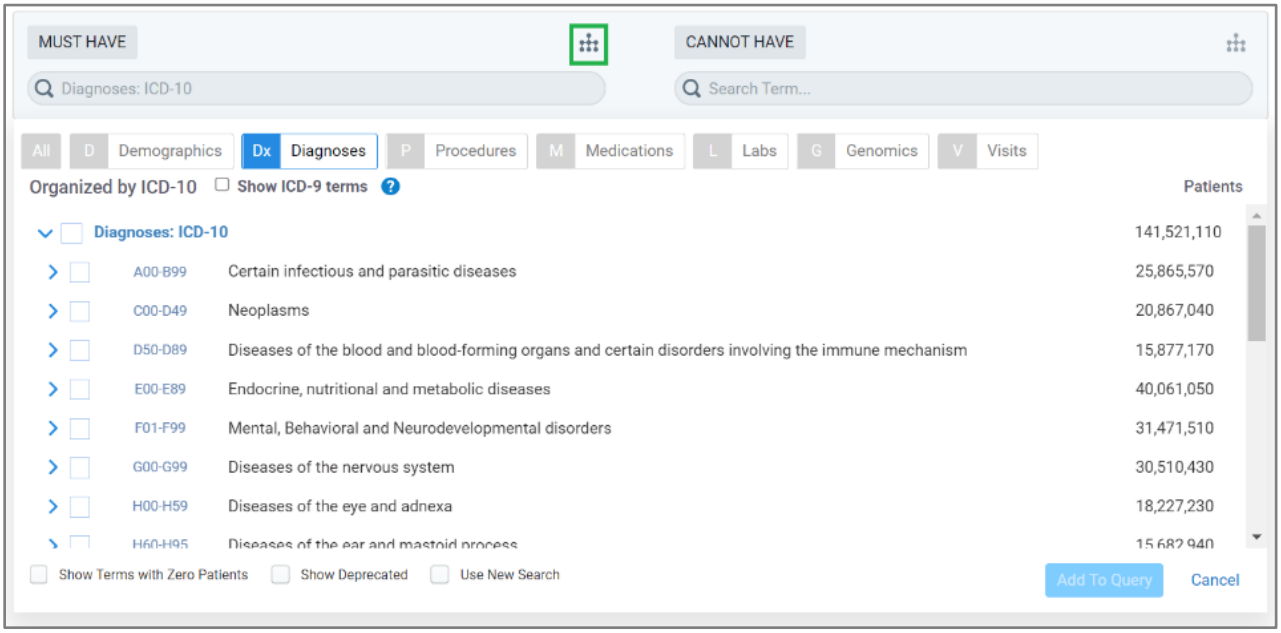
There are two ways to begin building a query:

The first is from scratch by using the search boxes within the Query Builder to add new terms, and the second way is to import a previously built query.

The Query Builder is divided vertically into a left **Must Have** side and a right **Cannot Have** side, and each side has its own search box:



The two search boxes function identically. To the right above each search box is the **hierarchy tree** button. Clicking this button will reveal the entire TriNetX data model. Each of the clinical fact types has a standard terminology to which the data are coded in order to optimize usability. A **clinical fact** is any data domain within the TriNetX data model including diagnoses, procedures, labs, medications, and genomic results.

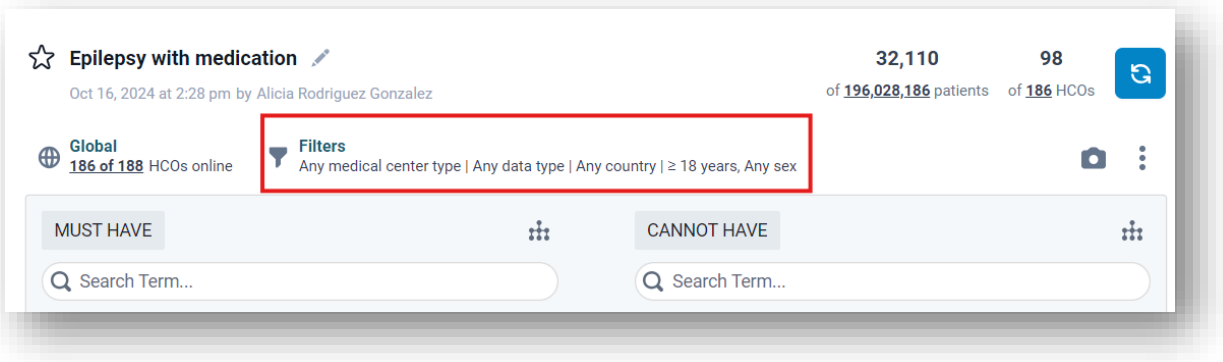


The coding systems used in TriNetX for each clinical fact type are:

- **Demographics:** Health Level Seven Version 3 (HL7 V3) Standard
- **Diagnoses:** International Classification of Diseases (ICD)-9-CM and ICD-10-CM
- **Oncology:** International Classification of Diseases for Oncology (ICD-O)
- **Procedures:** ICD-10 Procedure Coding System (ICD-10-PCS), Current Procedural Terminology (CPT), Healthcare Common Procedure Coding System (HCPCS), and Systematized Nomenclature of Medicine (SNOMED)
- **Medications:** Medications are represented at the level of ingredients, coded to RxNorm, and organized by The Department of Veterans Affairs (VA) Drug Classification system or Anatomical Therapeutic Chemical (ATC) Classification System.
- **Lab Results, Vitals, and Findings:** Logical Observation Identifiers Names and Codes (LOINC)
- **Genomics:** Human Genome Variation Society (HGVS)
- **Visits:** HL7 V3 Standard

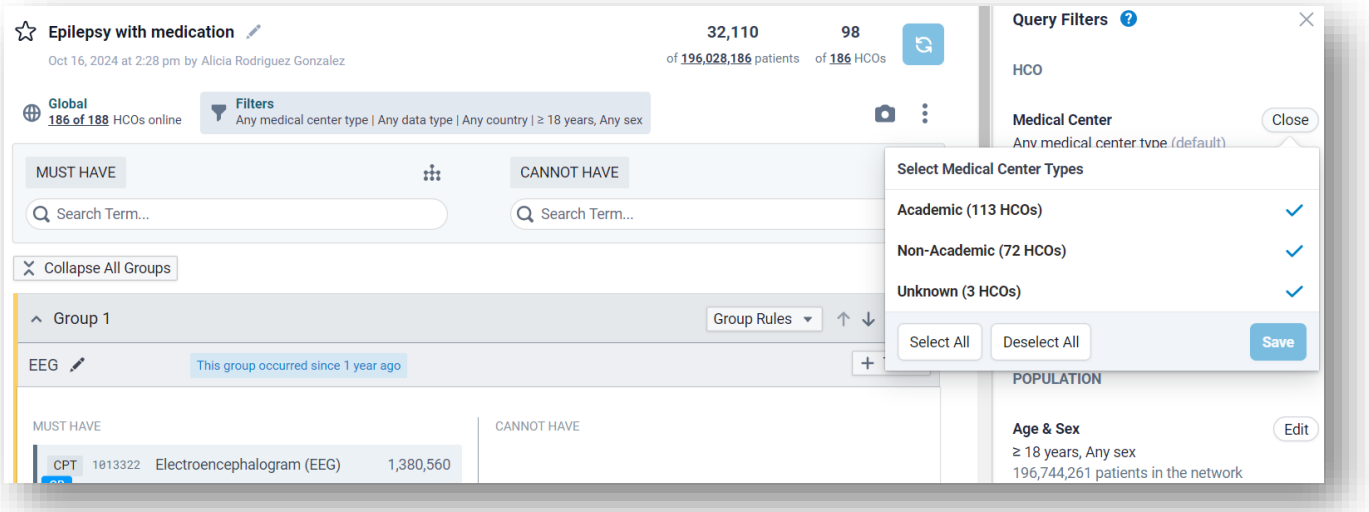
Query Filters

Query Filters can be found at the top of the Query Builder screen, to the right of the Network that is currently being used.

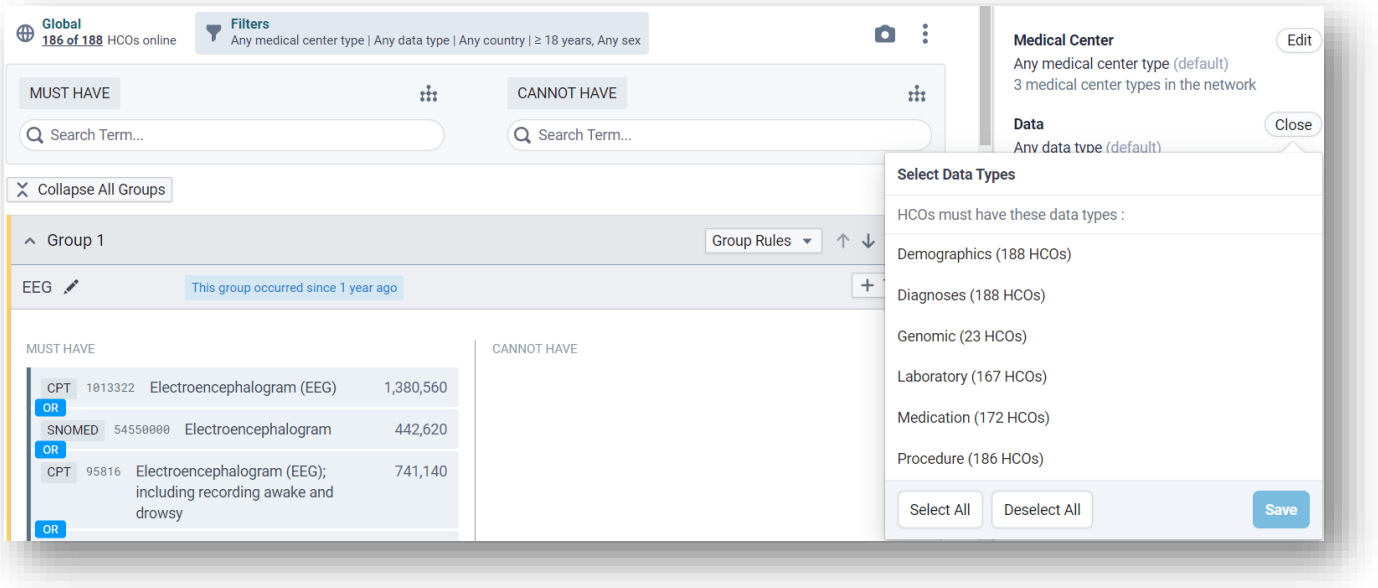


Here, in addition to the inclusion and exclusion criteria applied, users can refine the query even further to filter for **Medical Center type, Data type, Country, Facilities,** as well as **Age & Sex**. This filter menu may differ depending on whether the user is an Industry or HCO user.

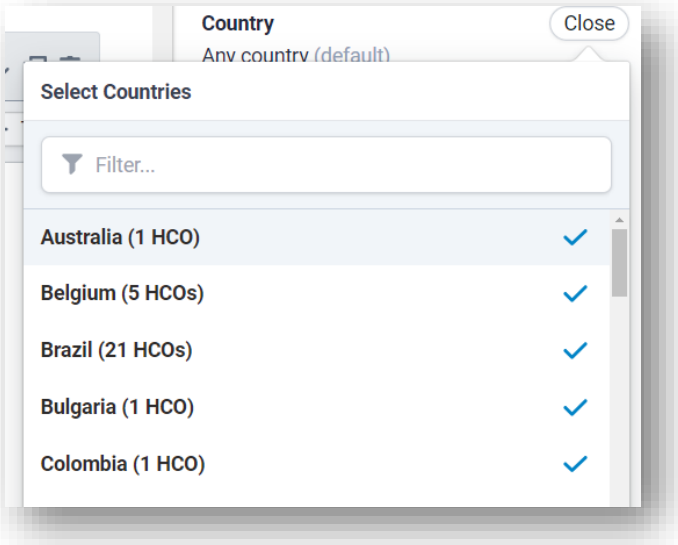
- By filtering for **Medical Center type**, users can now select what type of Medical Center the patients must be present at. The options here are Academic, Non-Academic, and Unknown, which can aid users in parsing down patient populations based on the type of medical center at which they receive care. It is important to note that the Medical Center type is assigned to the parent HCO. This will be visible in the HCO profile on a Network that maintains a pathway back to the HCOs (see Healthcare Organizations section).
    - An HCO is considered *Academic* if the parent HCO is affiliated with a medical school and/or university.
        - It is common for Academic Medical Center HCOs to have many locations that roll up to the parent HCO, in which case can include various setting types including community care. By selecting Academic as the Medical Center type, community care sites within the parent HCO will not be excluded from the query.
    - An HCO is considered *Non-Academic* if the parent HCO is NOT affiliated with a medical school and/or university.
    - An HCO is considered *Unknown* if the parent HCO does not have either type available in their HCO profile.



- By filtering for available **Data Types**, users can require that the HCOs returning patients in the query are providing TriNetX with specific data types. For example, if a user wants to ensure that their query is comprised of HCOs contributing medication and procedure data to TriNetX, they can select Medications and Procedure and click Save. HCOs that do not provide these data types will then not be included in the denominator for the cohort.

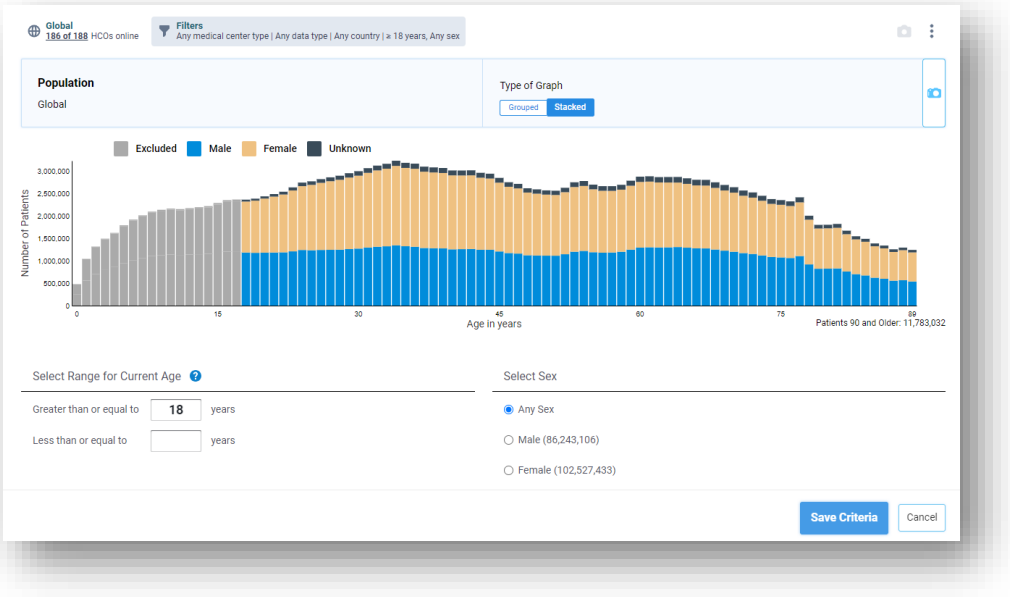


- By filtering for **Country**, Industry users can filter queries for HCOs located in a particular country or countries. For example, if a user was interested in identifying patients in the EU5, they could select Germany, France, Italy, Spain and the UK, and click Save. By default, all countries on a network will be included.

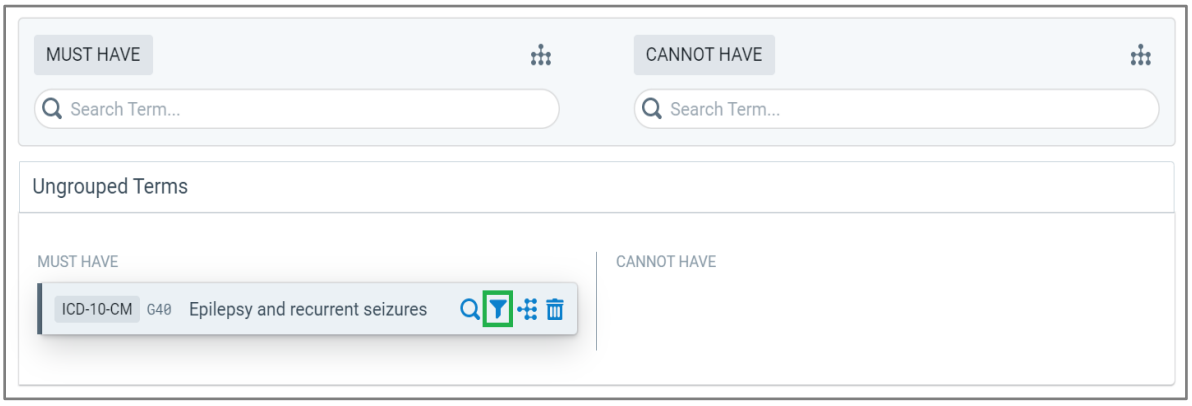


- By filtering for **Facilities**, HCO users are able to filter for specific facilities (if their organization reports site-level data to TriNetX), ensuring that patients meeting query criteria come from facilities of interest to the user.

- The **Age and Sex** filter allows users to see a distribution of patients' current age and sex within the entire network. Users also can select current age ranges, such as requiring patients to currently be 18 years or older, as shown in the screenshot below. Only whole number year ages can be input into the number fields (i.e., no fraction, decimal, or month ages). Users can also define if they want to look at a male, female, or all sex population.

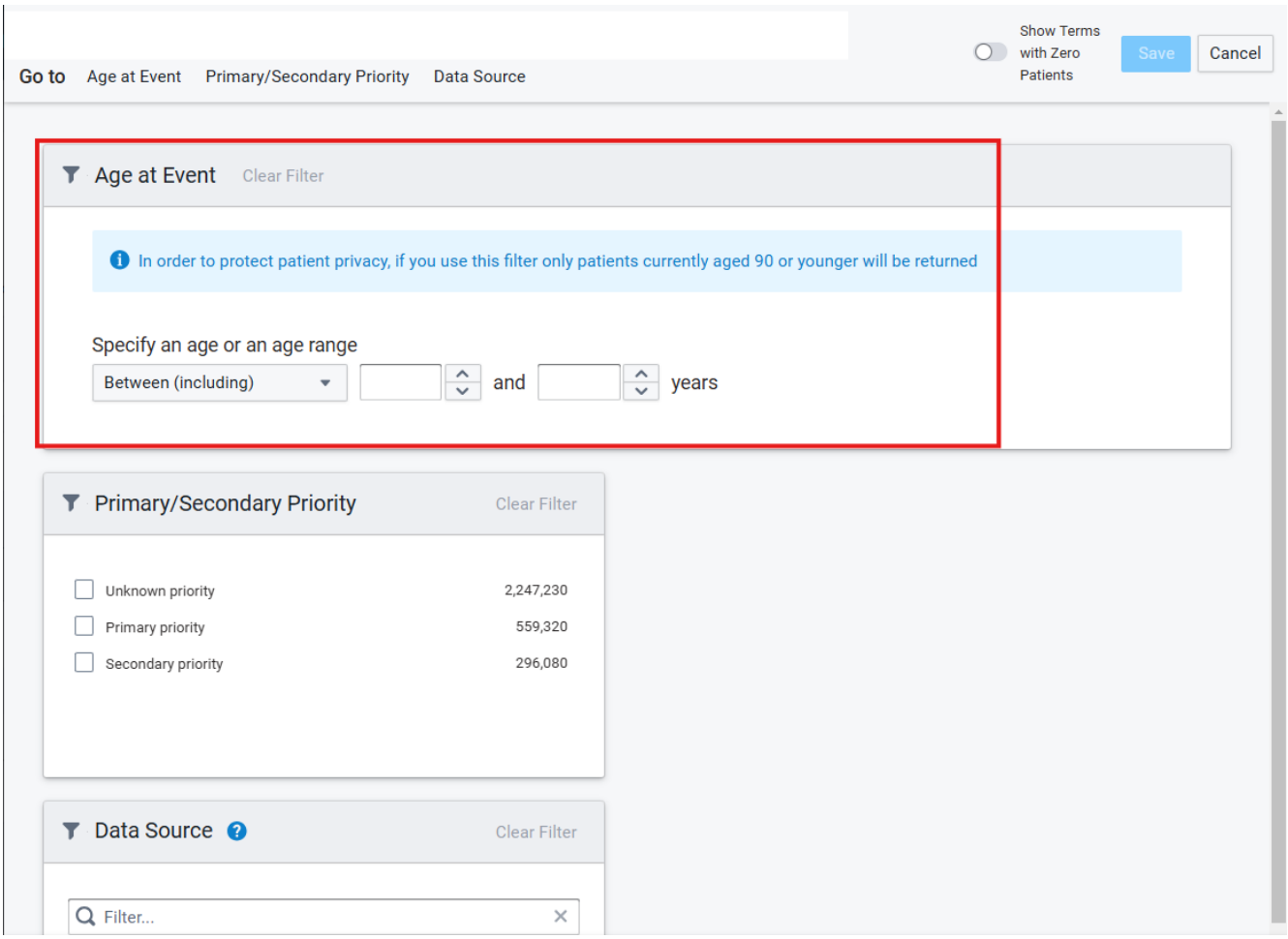


In addition to the ability to filter for current age, users can also restrict the age of cohorts by applying an age at event filter to a specific term in the query. This can be helpful in cases where the current age of patients does not need to be restricted, but patients must have had a clinical fact recorded within a particular age range. To apply age at event filters to a term, the user can hover their mouse over the term and select the blue funnel symbol:



Clicking the blue funnel symbol will reveal a panel with filters to be applied to the term. Here users can specify an age or an age range for when patients had the term documented.

Queries can restrict on both current age and age at event. For example, a protocol may require patients to be adults today but to have experienced epilepsy or seizures since they were children or adolescents.

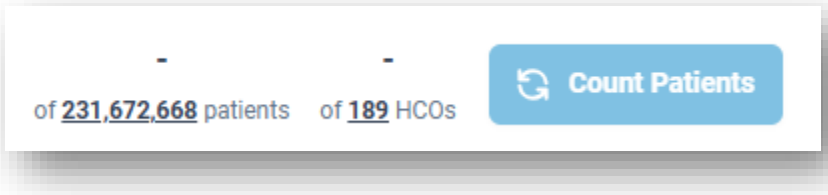


More information on using age filters and how to define patients by their age at event can be found in the Help Center: [How can I define the patients age? (Age at Event vs. Current Age)]

Dynamic patient count

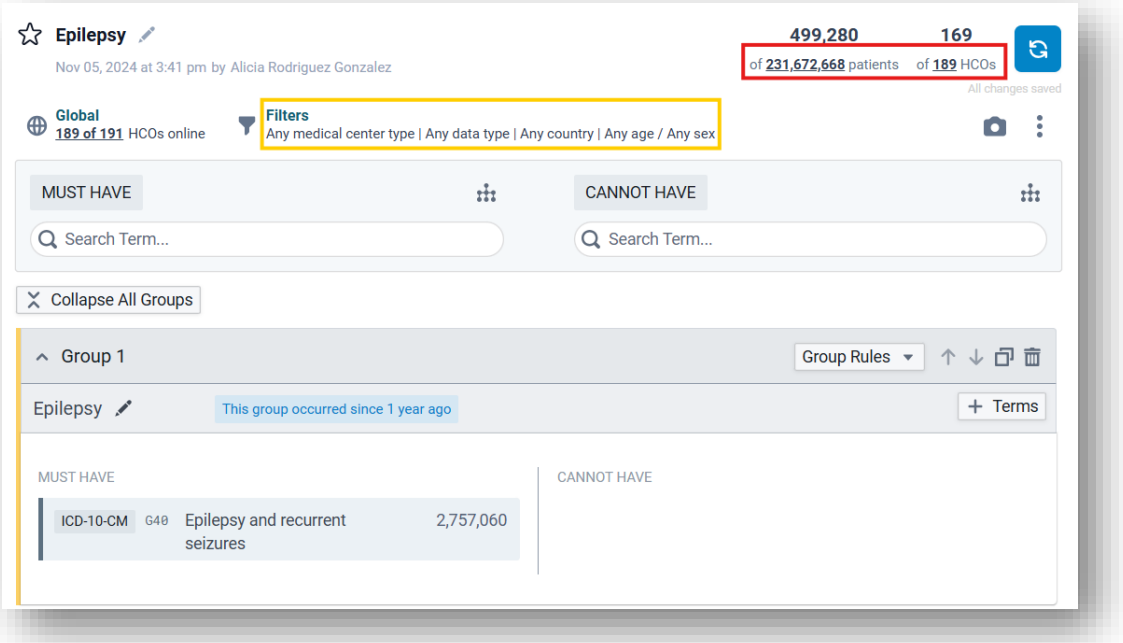
The **dynamic patient count** refers to the patient count seen at the top right of the Query Builder screen, which shows the total number of patients available to be queried on the selected network. It is referred to as "dynamic" because it changes as HCO filters and population filters are applied. This dynamic patient count helps users understand the baseline or denominator population they are querying from.

The dynamic patient count appears below the overall patient count for the query, which will be blank until the Count Patients button is clicked for the first time:

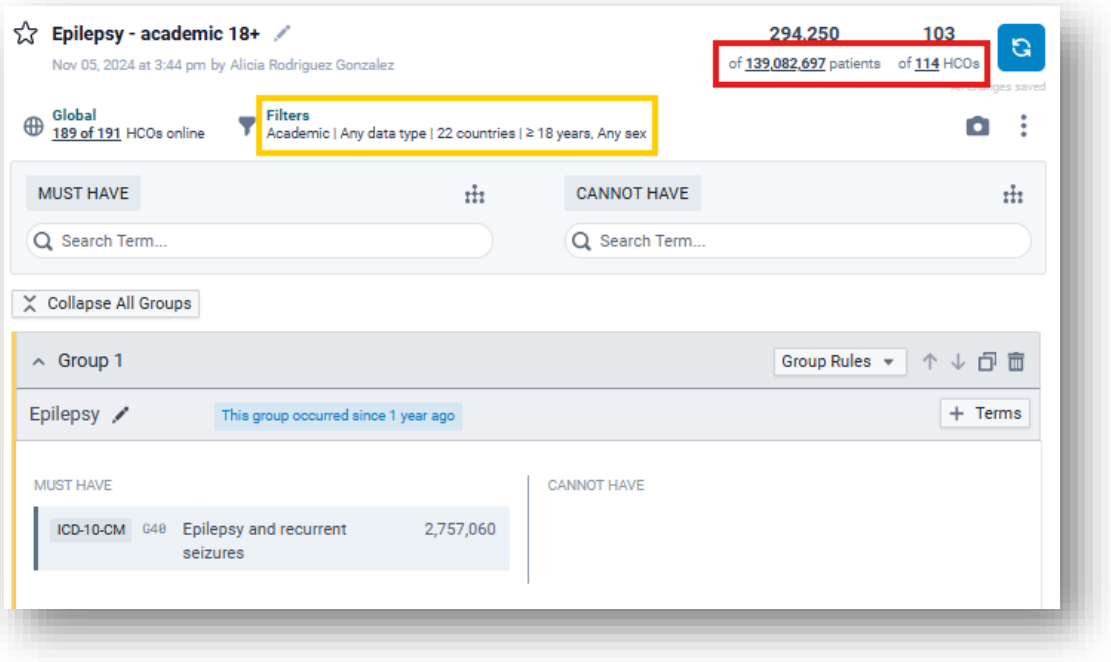


The dynamic patient count in this example is 231,672,668 patients. When the user enters criteria and clicks Count Patients (i.e., runs their query) the patient count will appear at the top of Query Builder, above the dynamic patient count.

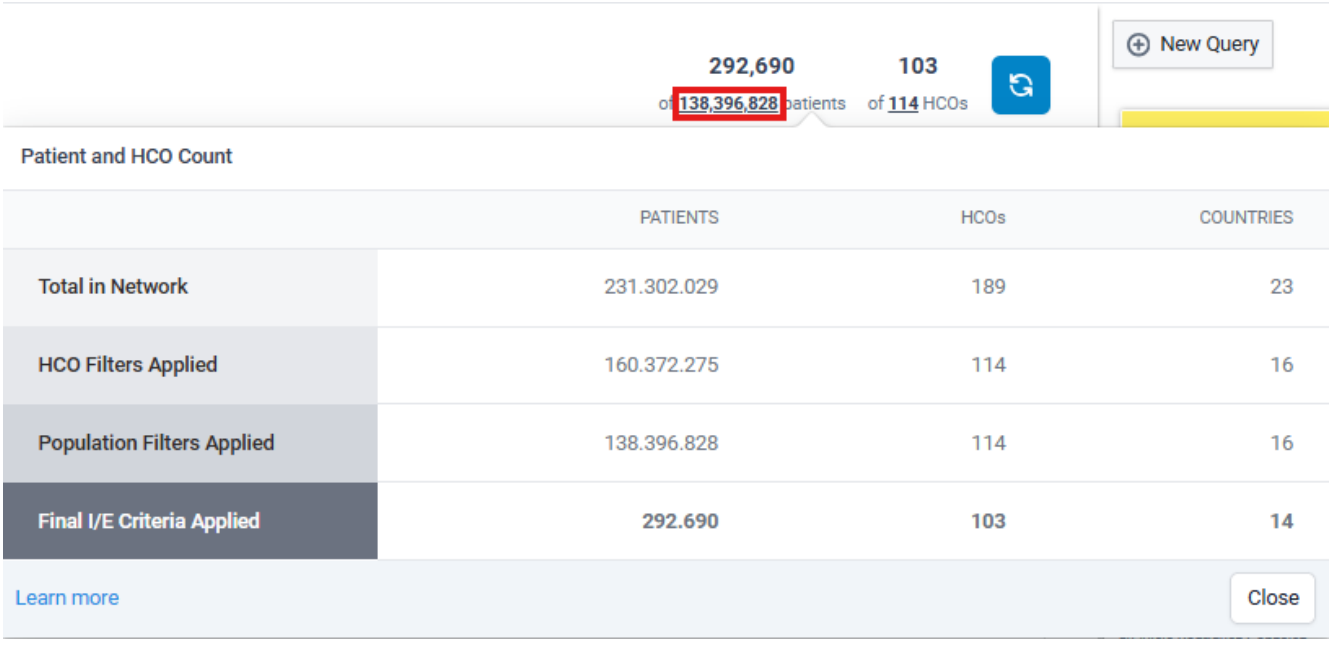
When no Query Filters are applied the Dynamic Patient Count reminds unchanged, like in this example:



When Query Filters are applied the Dynamic Patient Count updates to reflect the applied filters. In this example, it has been filtered by academic medical centers, patients that are 18 years old or older, and in 22 countries:

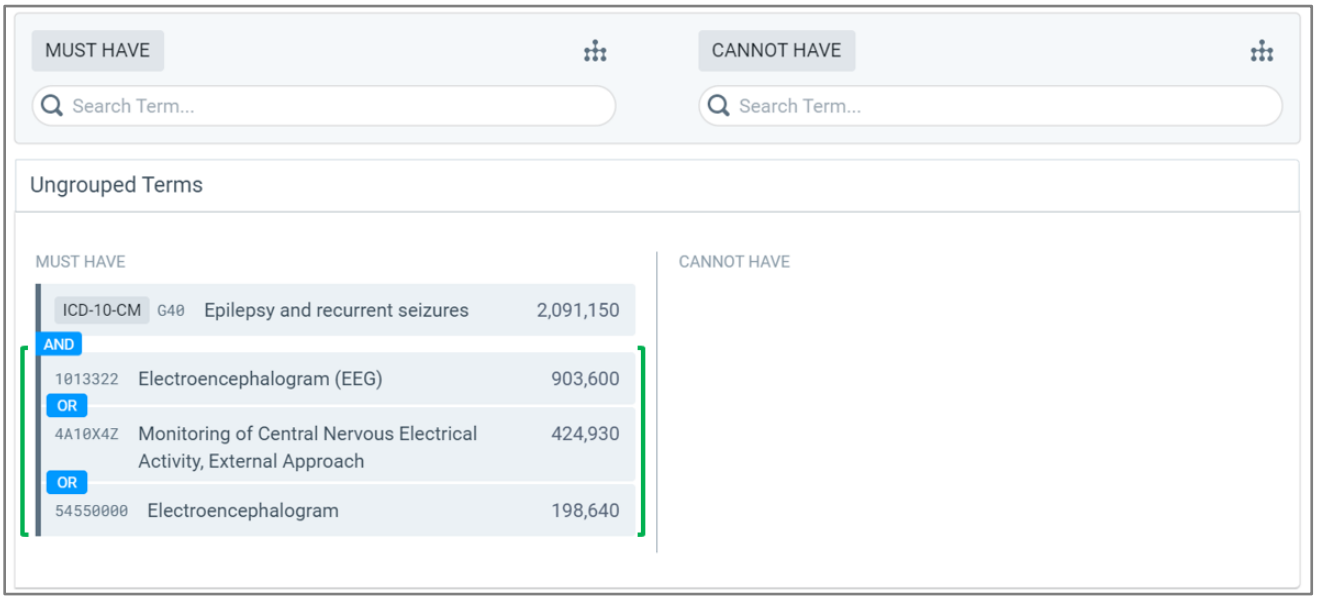


By clicking in the Dynamic Patient Count, an attrition table showing the impact of the filters applied is shown:



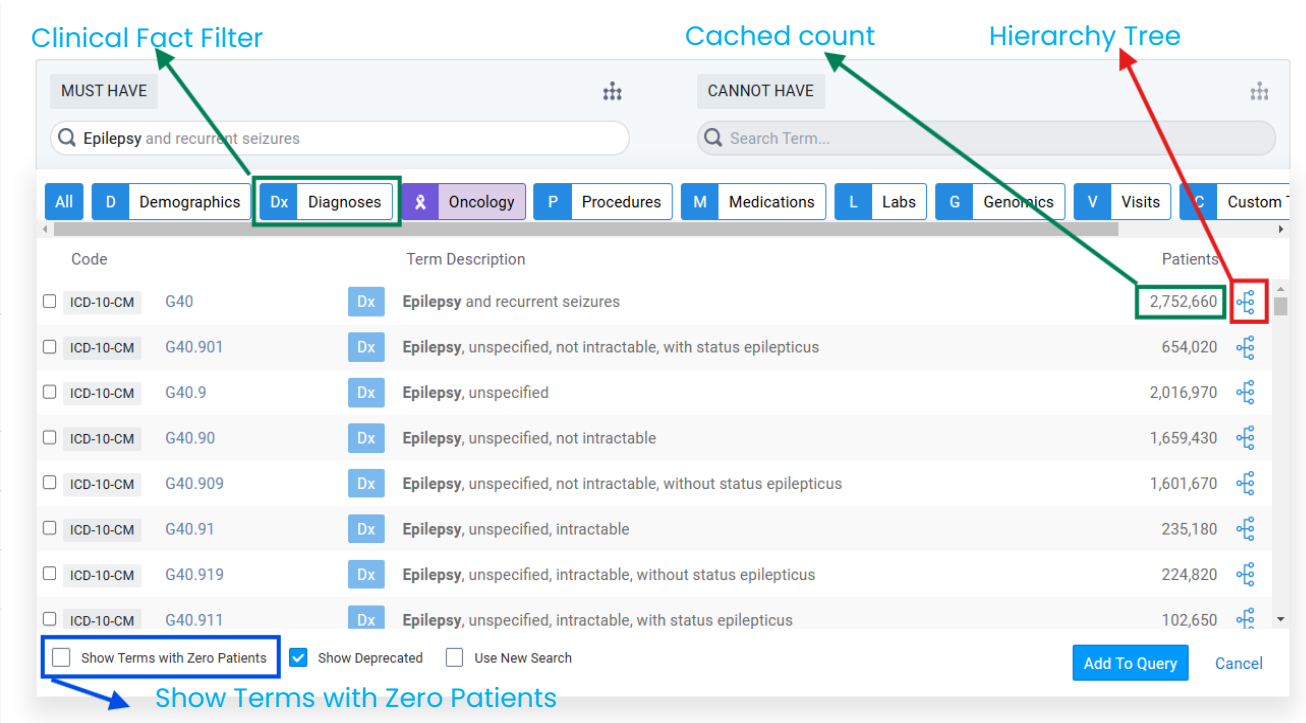
Understanding Logic Operators

When adding terms to the Must Have side of the Query Builder, the default **logical operator** between terms is 'AND'. Users can change between 'AND' and 'OR' logical operators by clicking on the operator. Users should be mindful of the operators and spacing between terms. In the following example, on the Must Have side of the Query Builder, terms joined by the 'OR' logical operator are in parentheses: Epilepsy **AND** (CPT EEG **OR** ICD-10-PCS EEG **OR** SNOMED EEG).



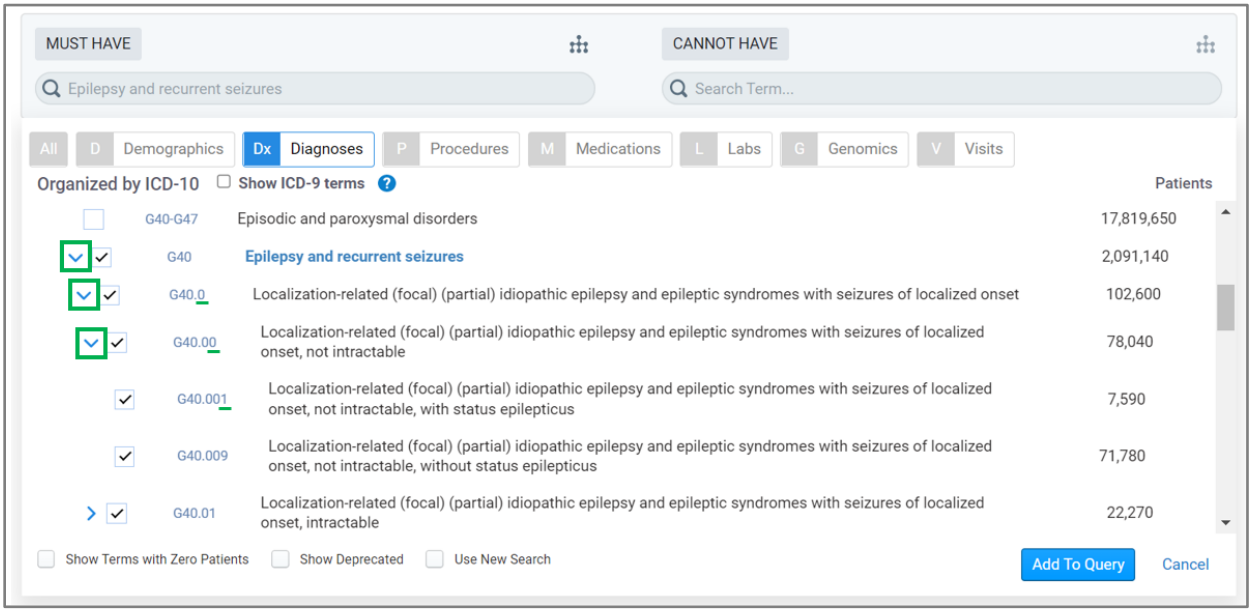
Querying Diagnoses

To begin, users can search in either the Must Have or Cannot Have search boxes for terms from their inclusion and exclusion criteria. Searching for 'epilepsy' returns the following results:

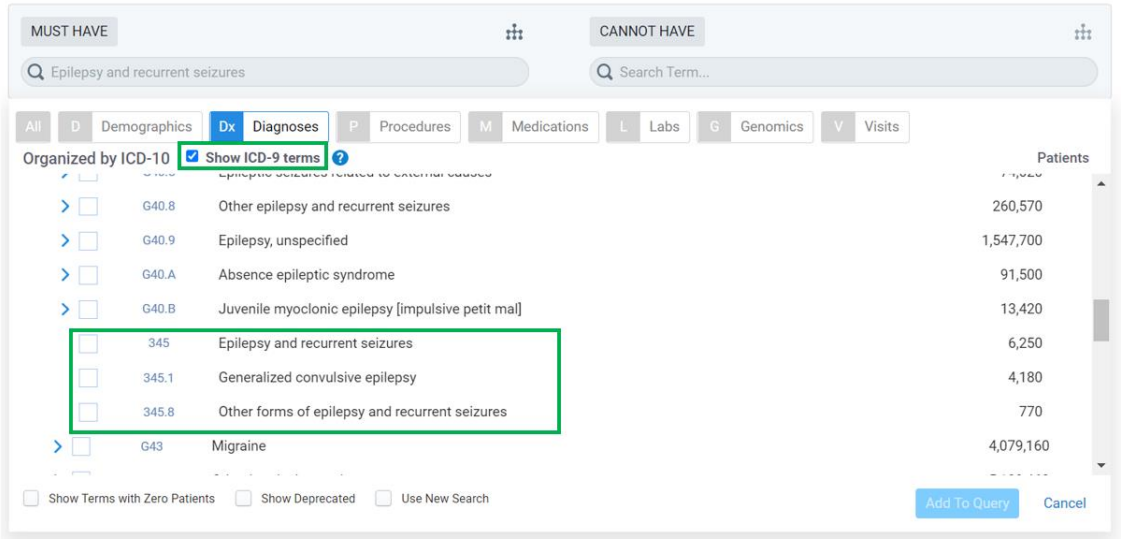


In the search results, users will see terms that contain the search term or are a synonym of the search term, the code for the term, and a cached count of the number of patients who have ever had the term documented at least once in the selected Network. Users can click on the clinical fact filter to show only results of a certain clinical fact type (e.g., only diagnoses). Clicking on a term itself or the checkbox next to the term and the Add to Query button will add the term to the Query Builder.

Adding a parent term (like the ICD-10 term G40 for Epilepsy and recurrent seizures) will automatically query for patients who have any of the child terms underneath that parent term. A **parent term** is a superordinate term in a hierarchy - it contains child terms under or within it. A **child term** is a subordinate term - a more granular/specific term within a group. In ICD-10-CM, the codes of contain numbers in more decimal places than their parent codes:



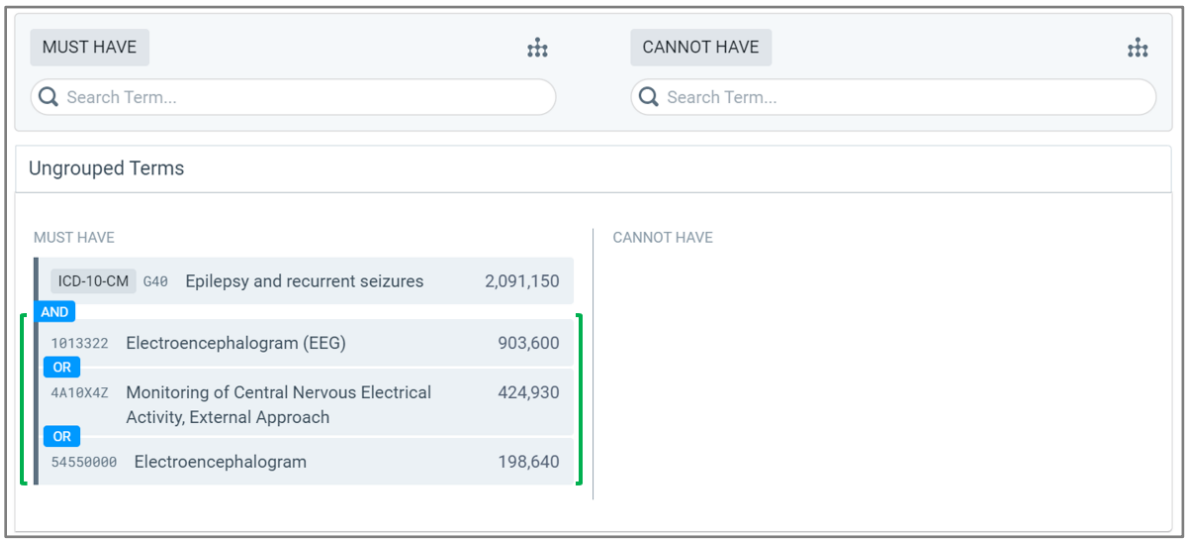
The default search results for diagnoses are ICD-10-CM terms. The diagnostic coding scheme before ICD-10-CM was ICD-9-CM, and some healthcare organizations documented diagnoses using ICD-9-CM in the past (or may continue to do so today). If a healthcare organization provides data in ICD-9-CM, TriNetX uses an ICD-9-to-10-CM mapping based on General Equivalence Mappings (GEMs) plus custom algorithms and curation to transform data from ICD-9-CM to ICD-10-CM. To view the ICD-9-CM terms mapped to an ICD-10-CM term, users can open the hierarchy tree and check the box to Show ICD-9 terms:



After showing ICD-9 terms, users can interact with individual ICD-9 terms (e.g., if a user wants to exclude a particular ICD-9 term). ICD-9-CM terms can be distinguished by ICD-10-CM terms because the codes are numeric only whereas ICD-10-CM codes are alphanumeric.

Querying Procedures

There are multiple coding schemas that healthcare organizations can use to document and bill for procedures: ICD-10-PCS, CPT, HCPCS, and SNOMED. To query comprehensively for patients who have undergone a particular procedure, users will want to use the ICD-10-PCS, CPT, and SNOMED procedures at a bare minimum joined by the 'OR' logical operator.

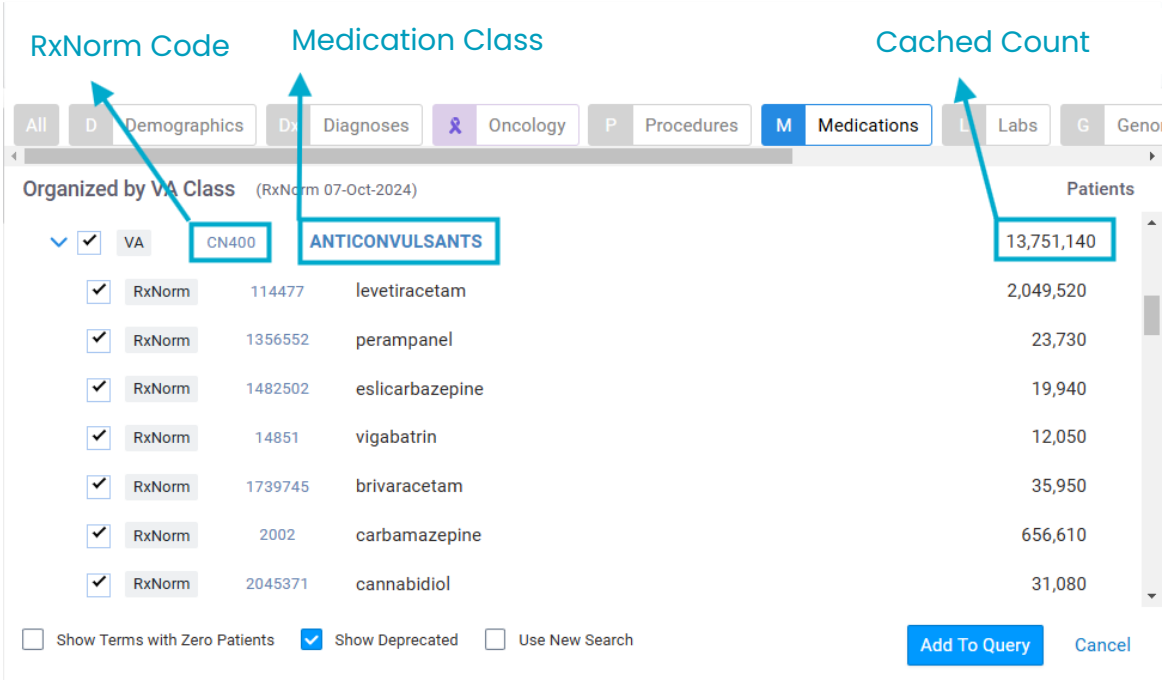


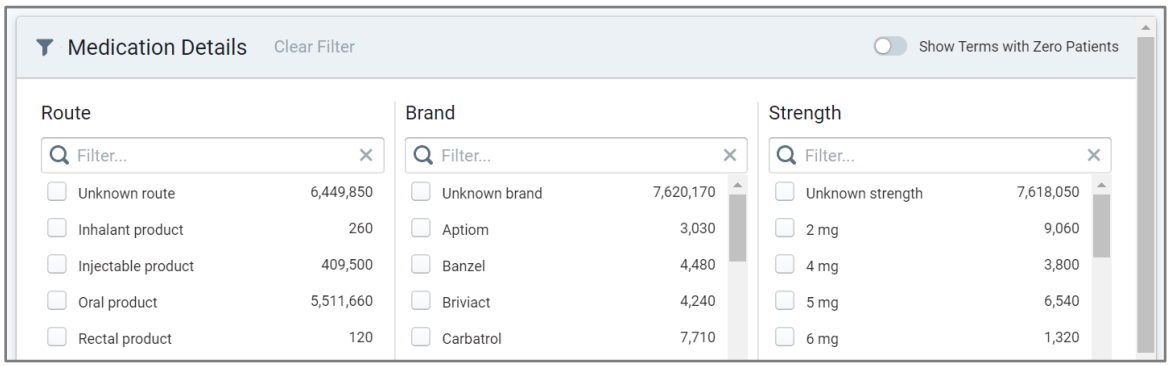
Querying Medications

TriNetX's data schema includes medication details placed by providers in patients' EMR. In the ambulatory setting, this is often an e-prescription (eRx) but can also be patient history, i.e., medication information collected by the provider when the patient tells the clinician what medications they are taking. In the inpatient setting, the most common medication data source is orders. An order is when a clinician enters an instruction into an inpatient EMR to have a medication be given to the patient. An order is different from a prescription intended for retail pharmacy because it is typically fulfilled by an in-house pharmacy and administered by a nurse or another clinician. Inpatient medication data may also come from an in-house pharmacy. Some HCOs use electronic medication administration systems, and those data are queryable in TriNetX.

In addition to incorporating individual medications into a query, entire classes of medications (e.g., anticonvulsants) can be incorporated into queries. Users can query for medications by searching for either the brand/trade name or the ingredient(s) in the drug. For example, the drug acetaminophen (ingredient) is also known as TYLENOL (brand name). All medication data are mapped to an ingredient-level RxNorm term. Some HCOs provide additional medication details (route, brand, and strength), which can be accessed using the funnel icon on the medication term in the query (see screenshot below). It is important to

note that not all HCOsprovide this granular medication detail data and including it in a query will reduce the query to patients from HCOs that provide these data.





There are many ways to organize medication data, and TriNetX has chosen two ways to organize medications: The Department of Veterans Affairs (VA) Drug Classification system or Anatomical Therapeutic Chemical (ATC) Classification System.

> **Helpful Analogy:**
> **Books in a library can be organized using the Dewey Decimal Classification whereby each book is given a unique shelfmark number and the books are organized by subject or class (e.g., computer science, philosophy, religion, etc.). In TriNetX, each medication ingredient's RxNorm code is like a shelfmark number and the VA Drug Classification system or ATC Classification System are like the Dewey Decimal Classification.**

More information about how medication is captured in TriNetX can be found here: How are Medications captured in TriNetX LIVE™?

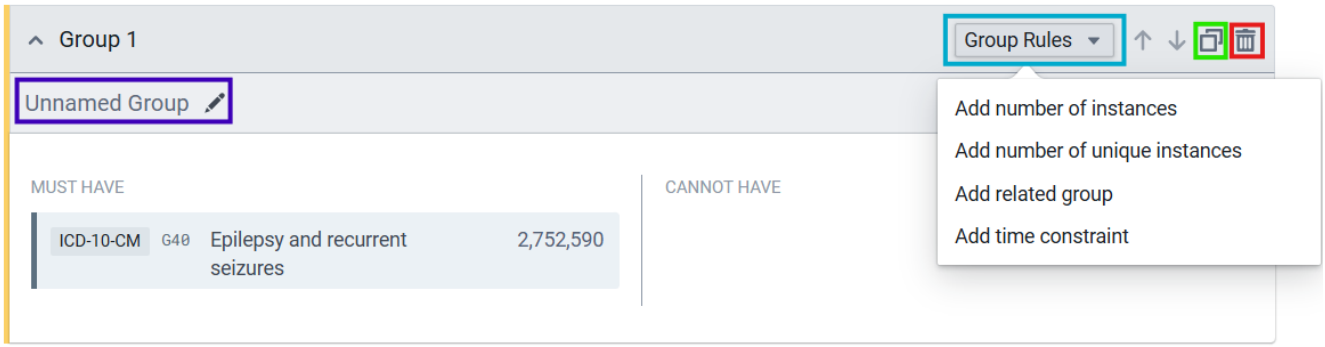
Querying Lab Results, Vitals and Findings

Laboratory tests are typically analyzed by machines at healthcare organizations or laboratories and the results flow into EHR systems electronically. TriNetX maps laboratory data to LOINC, a database and universal standard for identifying medical laboratory observations.

For users' convenience, TriNetX has created Curated terms for many labs, which group common laboratory tests with the same component and property into "roll-ups", replacing the need to add multiple terms for a lab to the Query Builder. For example, for the creatinine labs, TriNetX rolls up two LOINC codes (**38483-4** for *Creatinine [Mass/volume] in Blood* and **2160-0** for *Creatinine [Mass/volume] in Serum or Plasma*) into a TriNetX curated term **9024** for *Creatinine [Mass/volume] in Serum, Plasma or Blood*. When users add a single lab to the Query Builder, a panel will display a histogram of the lab value distribution for all patients on the network who have had that lab performed. From this panel, users can restrict on lab values and specify the occurrence as either most recent (i.e., to be captured by the query, a patient's most recent instance of the lab must satisfy the qualification) or ever (i.e., if a lab within the selected range has ever been documented in patients' medical records).

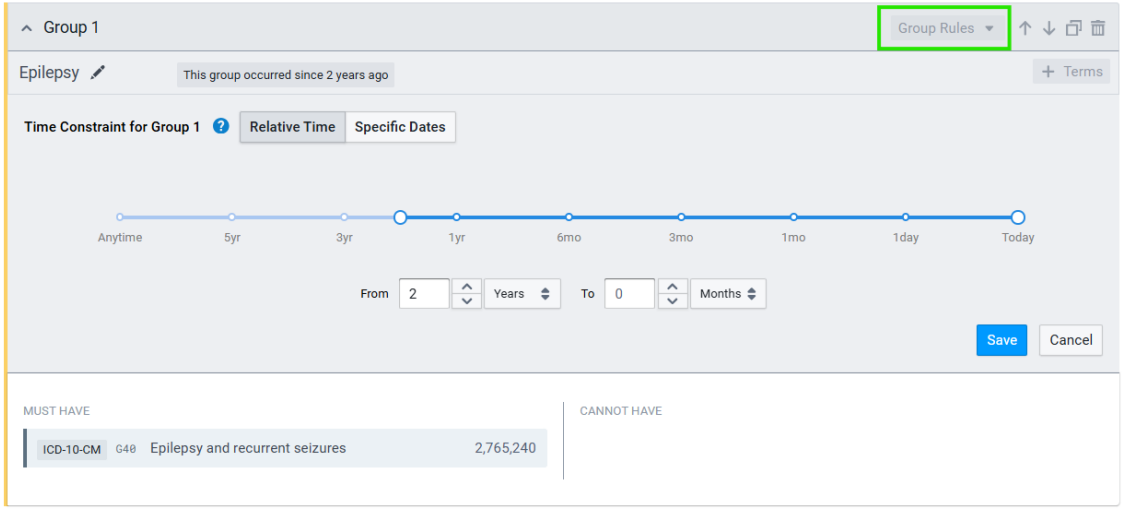
Group Filters

By default, terms added to Query Builder are placed in the Ungrouped Terms section at the top of the Must Have or Cannot Have side. Terms can be added to Groups, which allows users to introduce more organization into their queries and also allows for the placement of Number of Instances filters, and Number of Unique Instances, Related Groups and Temporal Constraints filters, by using the Group Rules button in blue in the following screenshot. Groups can also be named using the pencil in purple, Groups can also be deleted using the trash button in red and groups can be copied using the green button (users will be able to paste the group at the bottom of that or another query):



Temporal Constraints

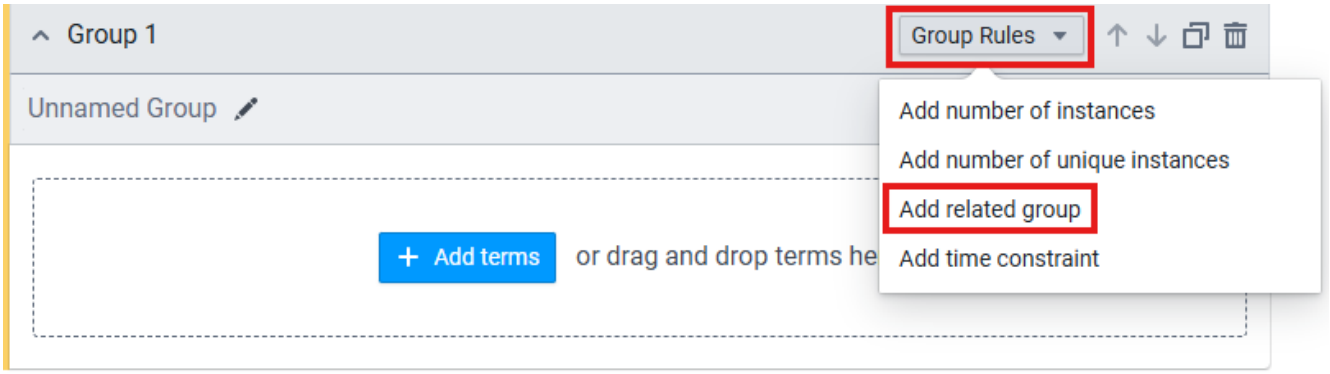
By default, ungrouped terms added to the Query Builder will be queried for anytime in patients' electronic medical record history. This means that a query for ungrouped terms on the Must Have side of Query Builder could return patients who had the term documented yesterday or ten (or more!) years ago. To query for patients who had a term documented within a certain timeframe, users will need to create a new group, place the term in a group, and use the Group Rules dropdown to select Add Time Constraint:



There are two types of time constraints: Relative Time (time relative to the date that the query is run) and Specific Dates (a specific calendar date or range of dates). Once a time constraint is added, the language on the Group will update to reflect the new timeframe.

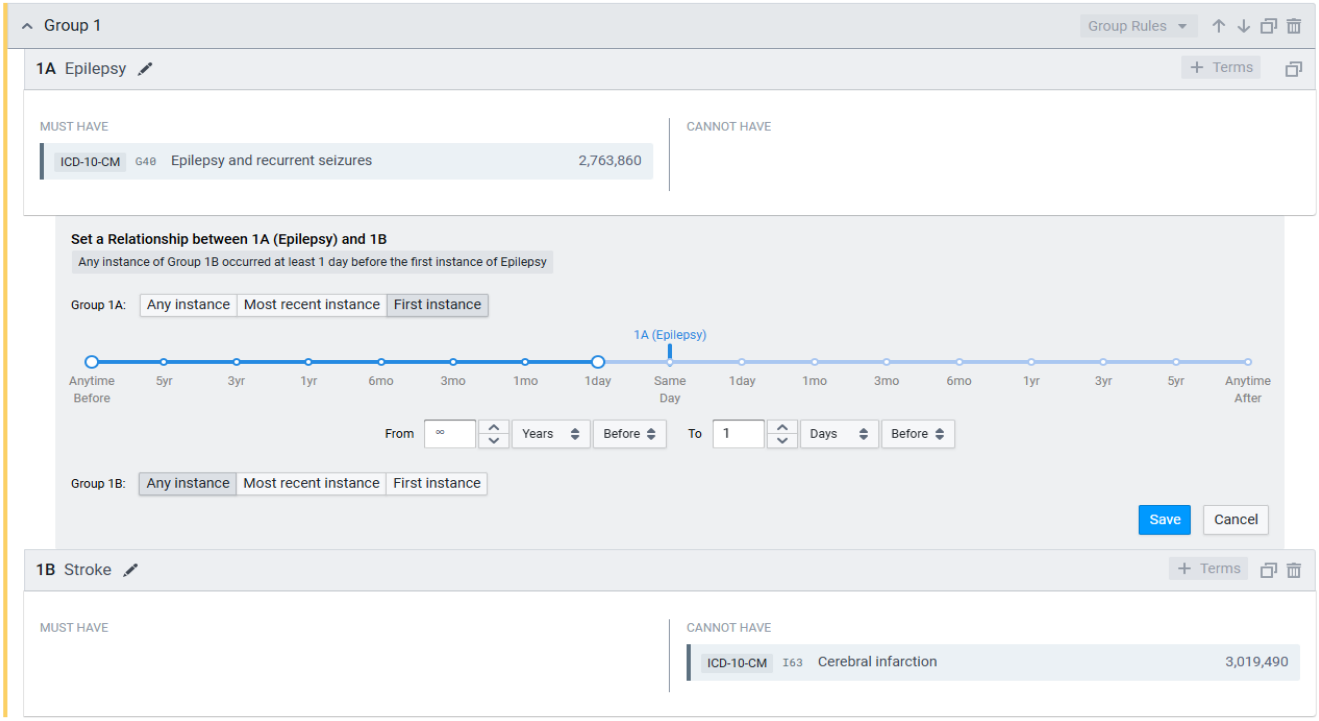
Related Groups

Related Groups allow users to specify that the terms within one group occurred before, on, or after the terms within another group in the Query Builder. A related group can be created from an existing Group by selecting Add Related Group from the Group Rules dropdown:



Adding a related group will expand the existing group into a a Group A and Group B. Users will then have the ability to define a relationship between the two groups. Group A will be the anchor in time (tip to remember: 'A' for anchor), and the user will specify whether the terms in Group B occurred before, on, or after the terms in Group A. Users can also specify an instance (i.e., any instance, most recent instance, or first instance) for each group.

For example: To exclude patients who have had a stroke before the first instance of epilepsy, the ICD-10 term G40 for epilepsy is placed on the Must Have side of Group A (the anchor), and the ICD-10 term I63 for cerebral infarction is placed on the Cannot Have side of Group B. The relationship is then set so that Group B occurs anytime before Group A, and the first instance of Group A is selected:

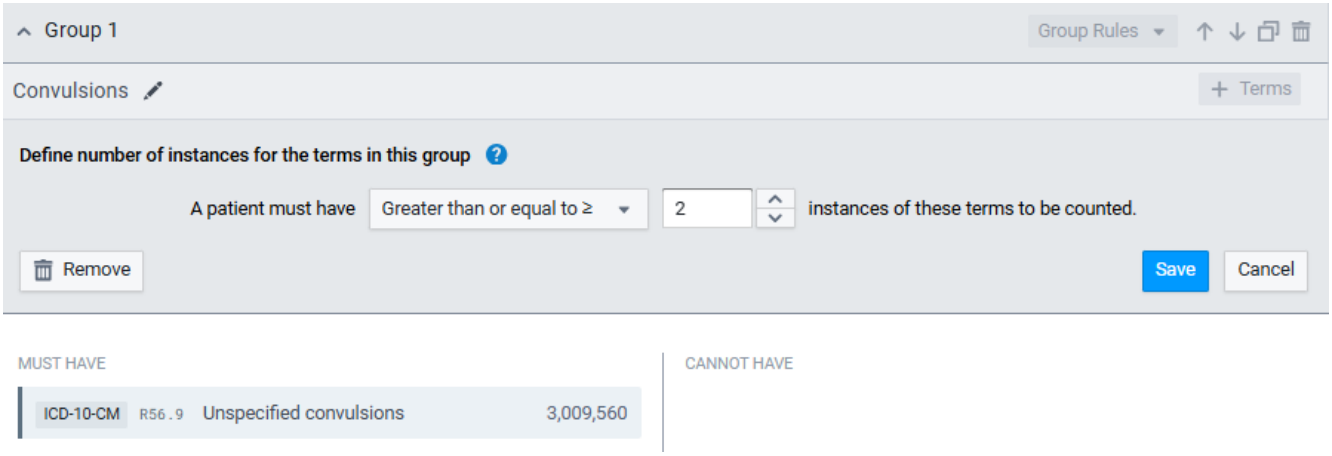


Number of Instances

Users can query patients whose record contains a specific number or range of instances for a particular term. An instance is any date on which the observation was recorded at least once.

The number of instances can be added by selecting Add number of instances from the Group Rules dropdown on a group:

A drop-down menu lets the user set a range or an exact value for the number of instances.

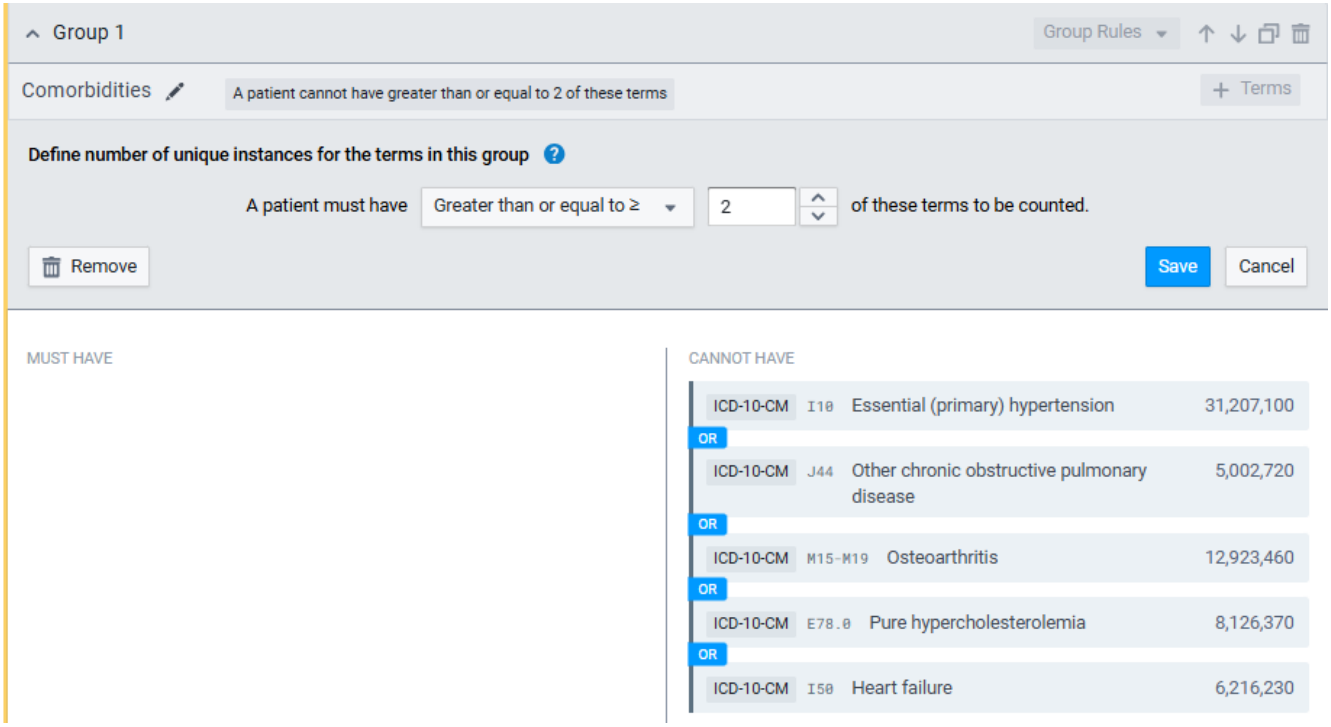


In this example, patients must have at least 2 instances of **R56.9** *Unspecified convulsions* ever in their medical record.

More information about Number of instances can be found here: How to query for Number of Instances and How do I specify number of instances for a group of related events?

Number of Unique Instances

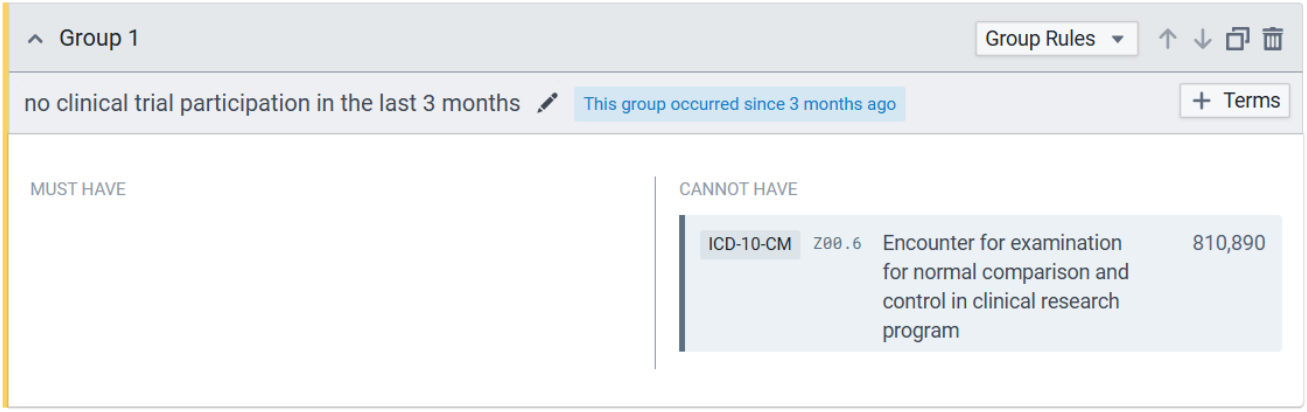
With Number of Unique Instances, users can specify that a cohort Must Have or Cannot Have greater than, equal to, or less than a specified number of unique terms within a Group. This can be useful, for example, when excluding patients who have 2 or more specific comorbidities from a list. To do this, the user would add the term for each comorbidity to the Cannot Have side of a group, select Add number of unique instances from the Group Rules dropdown, and enter the number of terms to be counted. In this example, it is set as Greater than or equal to 2 of these terms to be counted:



More information about Number of Unique instances can be found here: Number of Unique Instances

Querying for Clinical Trial Participation

Clinical trial protocols often specify that patients currently participating in another clinical trial should be excluded from the study population. The ICD-10 term **Z00.6** for *Encounter for examination for normal comparison and control in clinical research program* can be incorporated into queries to exclude patients who have recently participated in a clinical trial. Providers are required to report the Z00.6 term when billing for clinical study protocol items and services (e.g., treatments, imaging studies, laboratory tests, procedures) performed during the time period that the patient participates in the clinical trial, even if the treatment would otherwise be conventional care for a patient not participating in a trial. TriNetX recommends placing the term in a group with a recent temporal constraint (e.g., in the last three months).

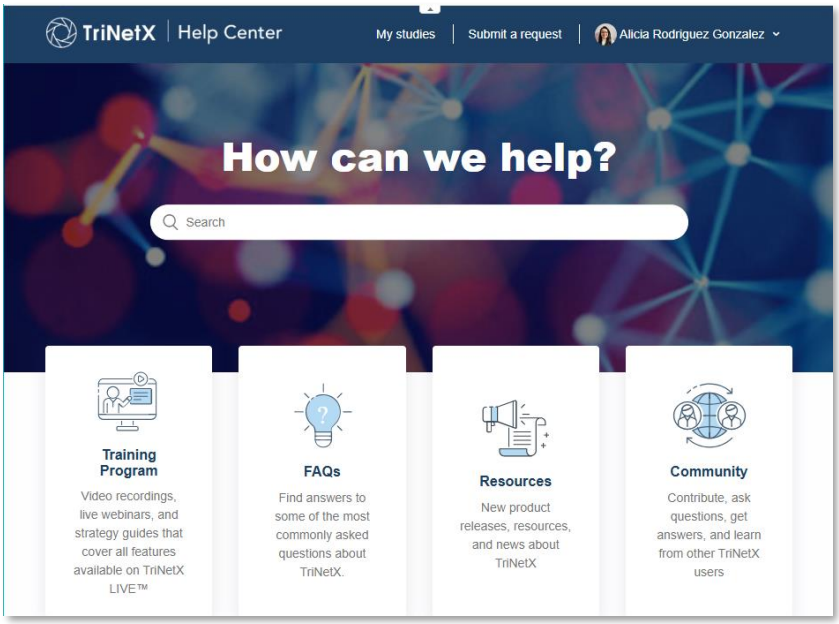


Querying for Deceased Patients

Mortality data in TriNetX comes from several sources. HCOs will record a death in the EMR if a patient is known to be deceased at the HCO (e.g., for patients who die during a hospital stay). For a subset of HCOs, death records are supplemented with data from billable codes from closed claims, Social Security Administration Master Death File, private obituaries, and private claims. Death data are queryable on all networks on TriNetX using the Deceased term. Users can exclude the Deceased term to exclude patients who are known to be deceased on the selected network. More information about mortality data in TriNetX can be found here: What Mortality Data is available in TriNetX?

OTHER RESOURCES

As always, there are additional resources available to users who require more assistance. The best place to start is the Help Center, where users can find training videos, FAQs, new product releases, and more.



The webinar titled TriNetX 101 - Basic Functionality Query Building in the **Training Center** goes over the strategies featured in this guide.

Design Assistance is a great resource always available to users to receive assistance specifically relating to their queries and analyses. Users can type questions in the Design Assistance field and TriNetX's Clinical Feasibility and Analytics Team will respond within 1 business day. Design Assistance shares the user's study directly with the TriNetX team.