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From Blood and Guts To Bits and Bytes: Clinical Research Informatics Using TriNetX

Thursday, June 15th, 2023

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June 2023 Study of the Month:

Binge Eating Disorder Study

Are you struggling with overeating?

What
A twelve week study assessing an investigational medication for binge eating disorder.

Who
Adults aged 18-65 years of age with binge eating disorder.

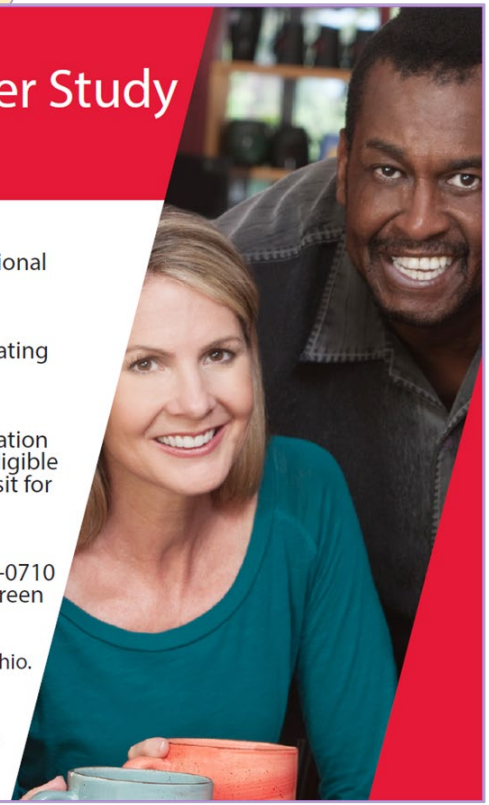
Pay
All study visits, tests, procedures, and medication will be provided at no cost to participants. Eligible participants will be compensated $50 per visit for their time and travel.

Details
For more information, contact us at 513-536-0710 or visit www.LCOH.info to complete a pre-screen questionnaire.

Located at the Lindner Center of HOPE, Mason, Ohio.

UC Health | UC Health Lindner Center of HOPE

12-20 IRB # PENDING



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SOCRA CRP CERTIFICATION EXAMINATION
Hosted by CCHMC
Tuesday, October 10th, 2023

Please visit the SOCRA website for more details.

The Registration Deadline is Monday, August 28th, 2023

Register Here

CCHMC CRP will be hosting open review sessions prior to the exam date for anyone interested on in August (Dates and times TBD) hosted on Microsoft Teams (link to be provided).

For any questions or further information, please contact the CCHMC CRP Group at CRP@cchmc.org or Nate Harris at harrisnl@ucmail.uc.edu

Friday, July 7th , 2023

Electronic Pathways - HIPAA, Texting, and Emails

Janelle Allen
Professor, Lecturer
University of Cincinnati, College of Medicine

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Today's Presentation:

From Blood and Guts To Bits and Bytes: Clinical Research Informatics Using TriNetX

Jason Keller, MS
Associate Director, Data Services
UC Center for Health Informatics
Department of Biomedical Informatics

UC College of Medicine | Biomedical Informatics

From Blood and Guts
To Bits and Bytes

Clinical Research Informatics Using TriNetX

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June 15, 2023

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Disclosure

I have no financial disclosure
or conflicts of interest with the presented
material in this presentation.

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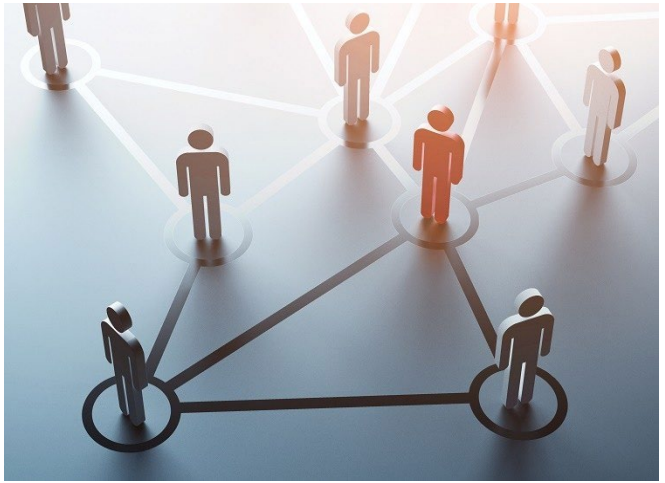
What is TriNetX?

TriNetX is a web-based platform that puts you at the center of their real-world data and evidence ecosystem. It has a powerful, easy-to-use interface to assist you in building and analyzing cohorts drawn from around the globe in just minutes.



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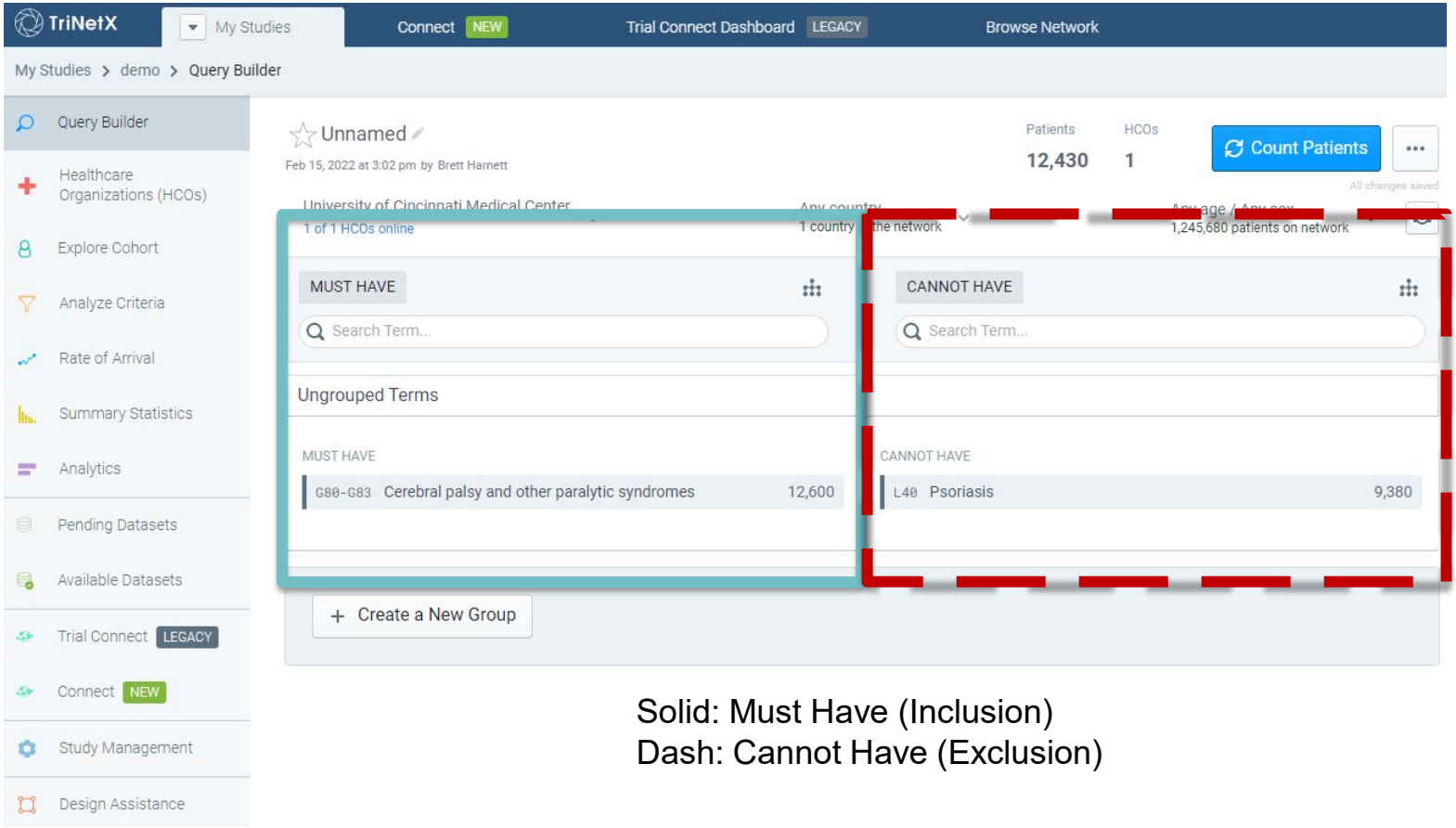
Core Network Features

- Query Builder
  - Define your cohort as precise and unique as your hypothesis, and lets you specify the inclusion/exclusion criteria.
- Explore Cohort
  - Instantly uncover a wealth of details about your cohort of interest, from the prevalence of medications to mean lab values.
- Advance Analytics
  - Analyze and compare outcomes, reveal treatment pathways, and more with statistically robust tools.
- TriNetX Connect
  - Invite the HCO who provides the data to participate in your study. The HCO can re-identify their patients.

Local vs. Research Network

- UCMC Network
  - 1.3M+ patients
  - 1 HCO
  - 1 country
- Research Network
  - 120M+ patients
  - 83 HCOs
  - 4 countries

Most Basic Level



Solid: Must Have (Inclusion)
Dash: Cannot Have (Exclusion)

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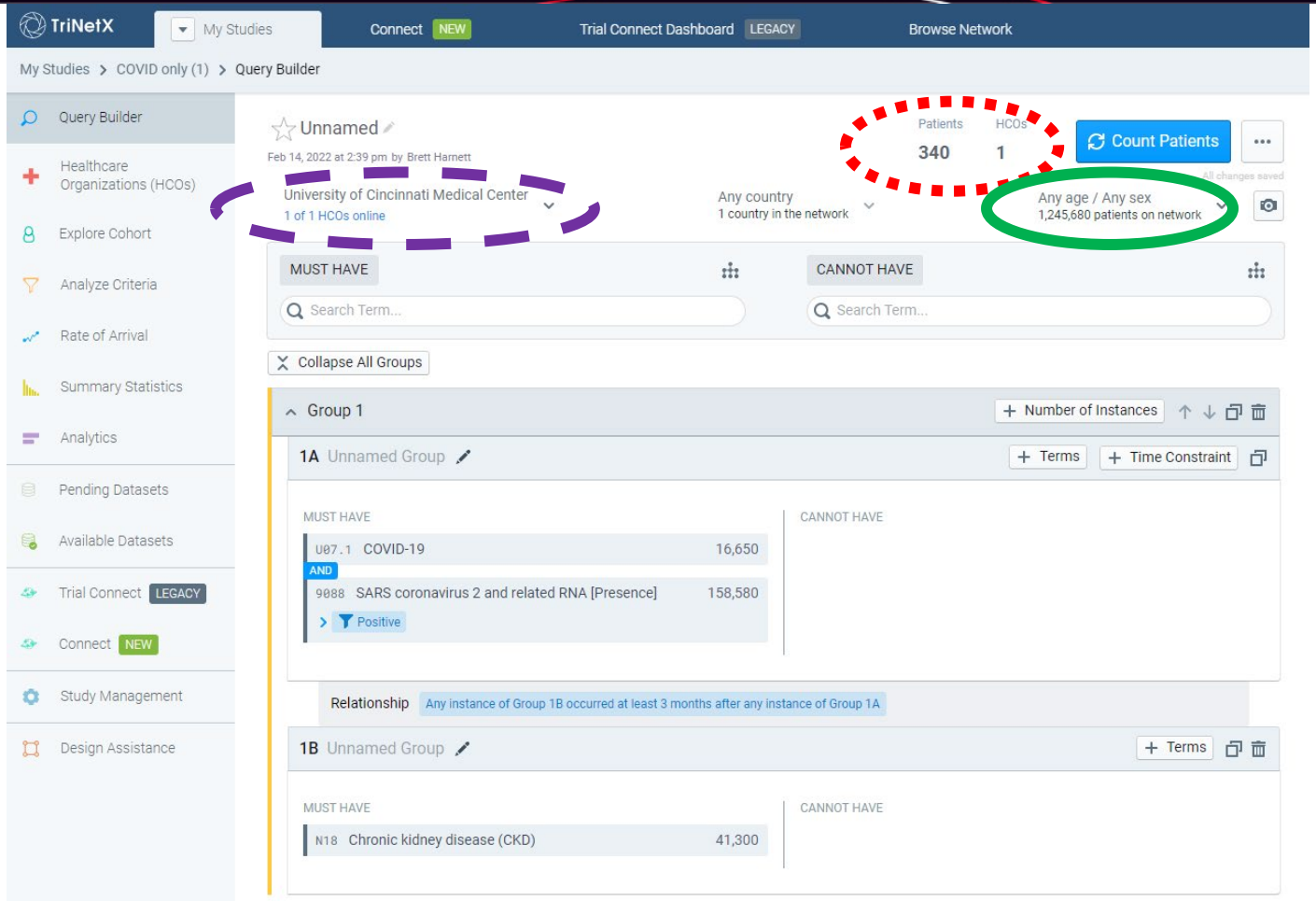

Purple (dash): Choose the network

Red (dots): Displays cohort count and HCO count

Green (solid): Choose demographics (gender, age range)

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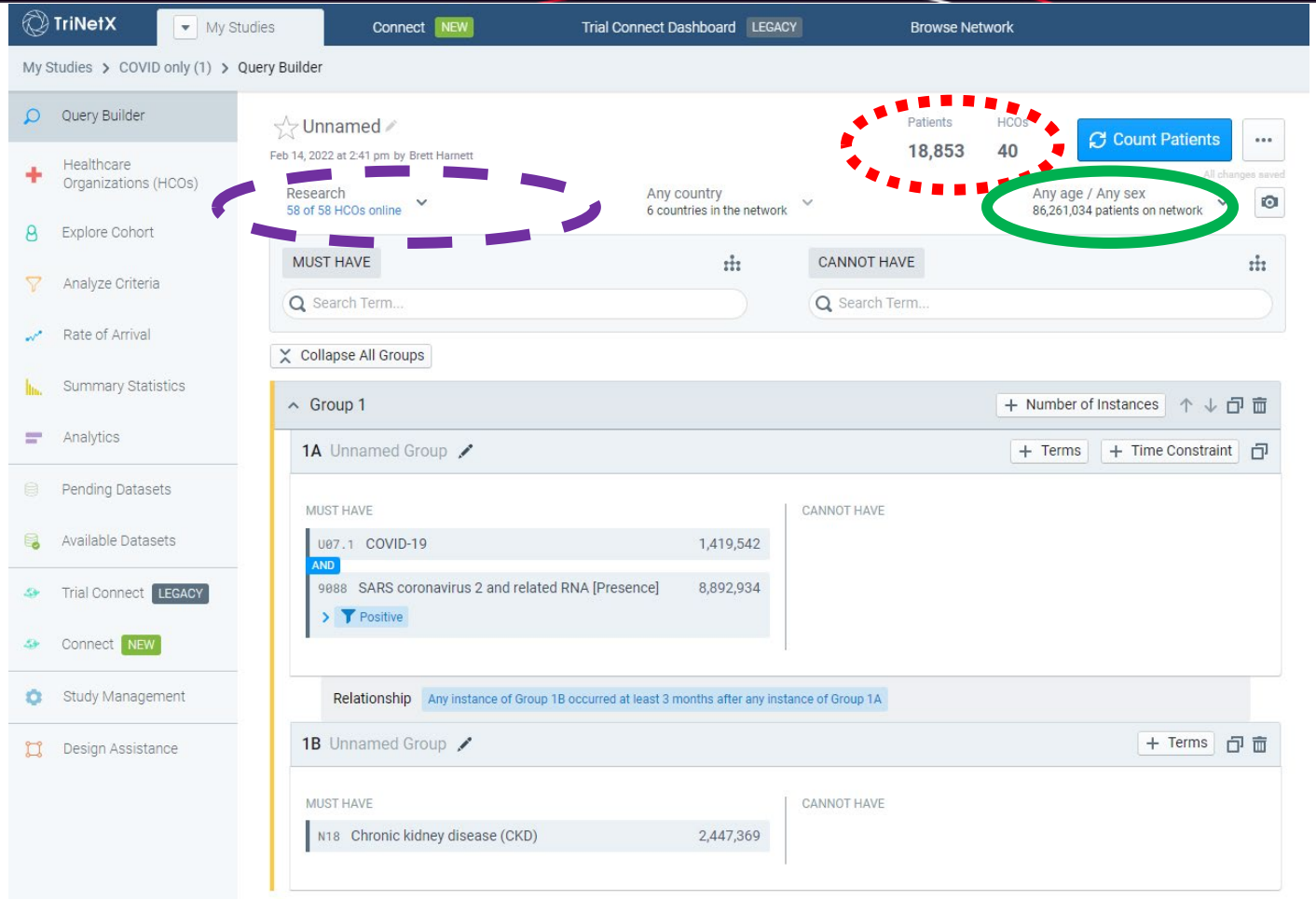

Using the exact same logic, select the Research network to run the query against 86M+ instead of 1.2M+.

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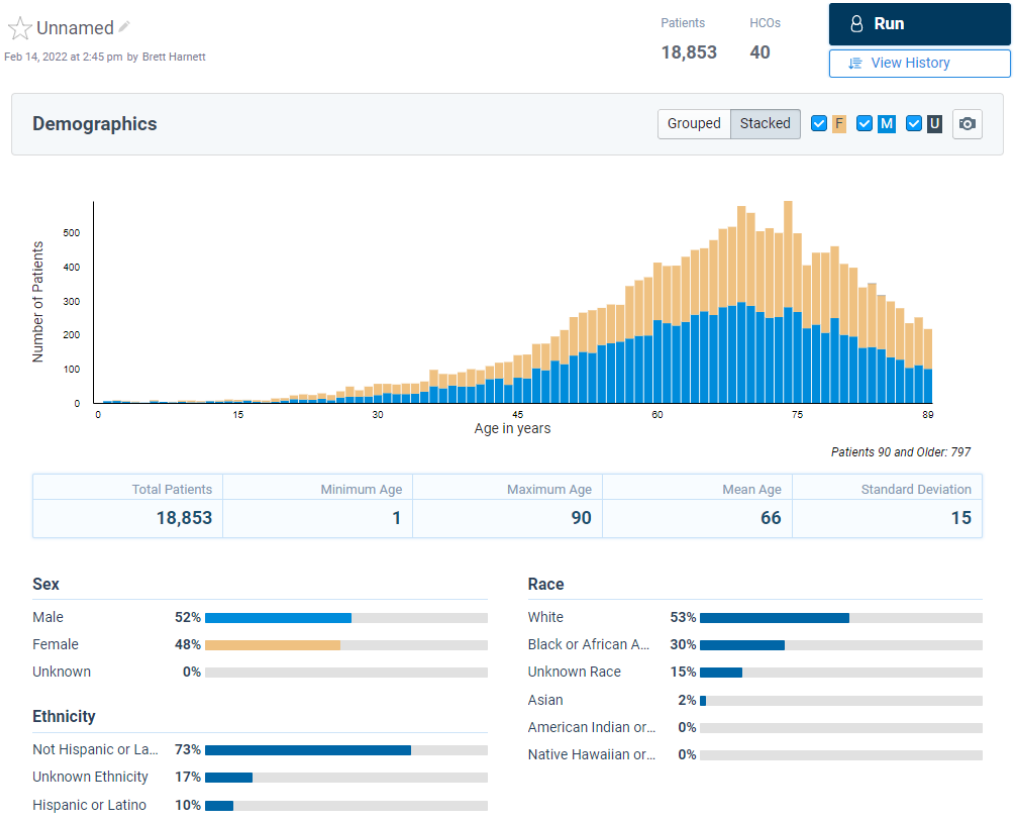
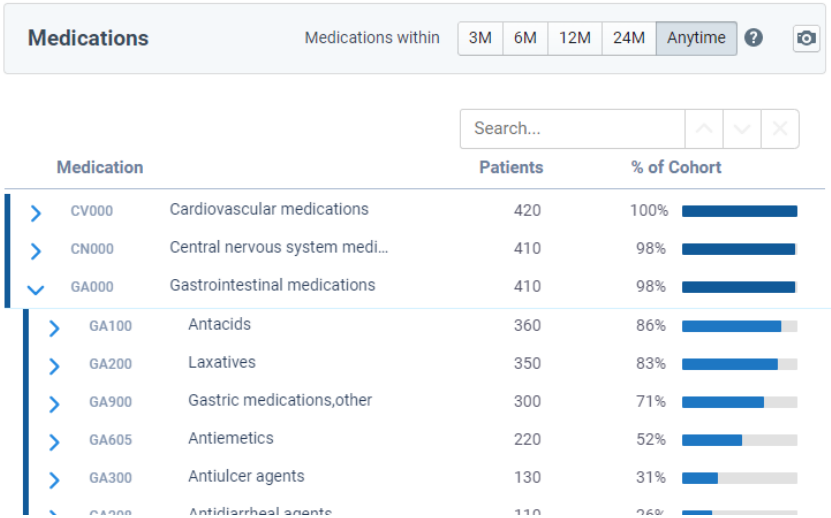


Tools for exploring the cohort are part of the interface with drill-down capabilities.



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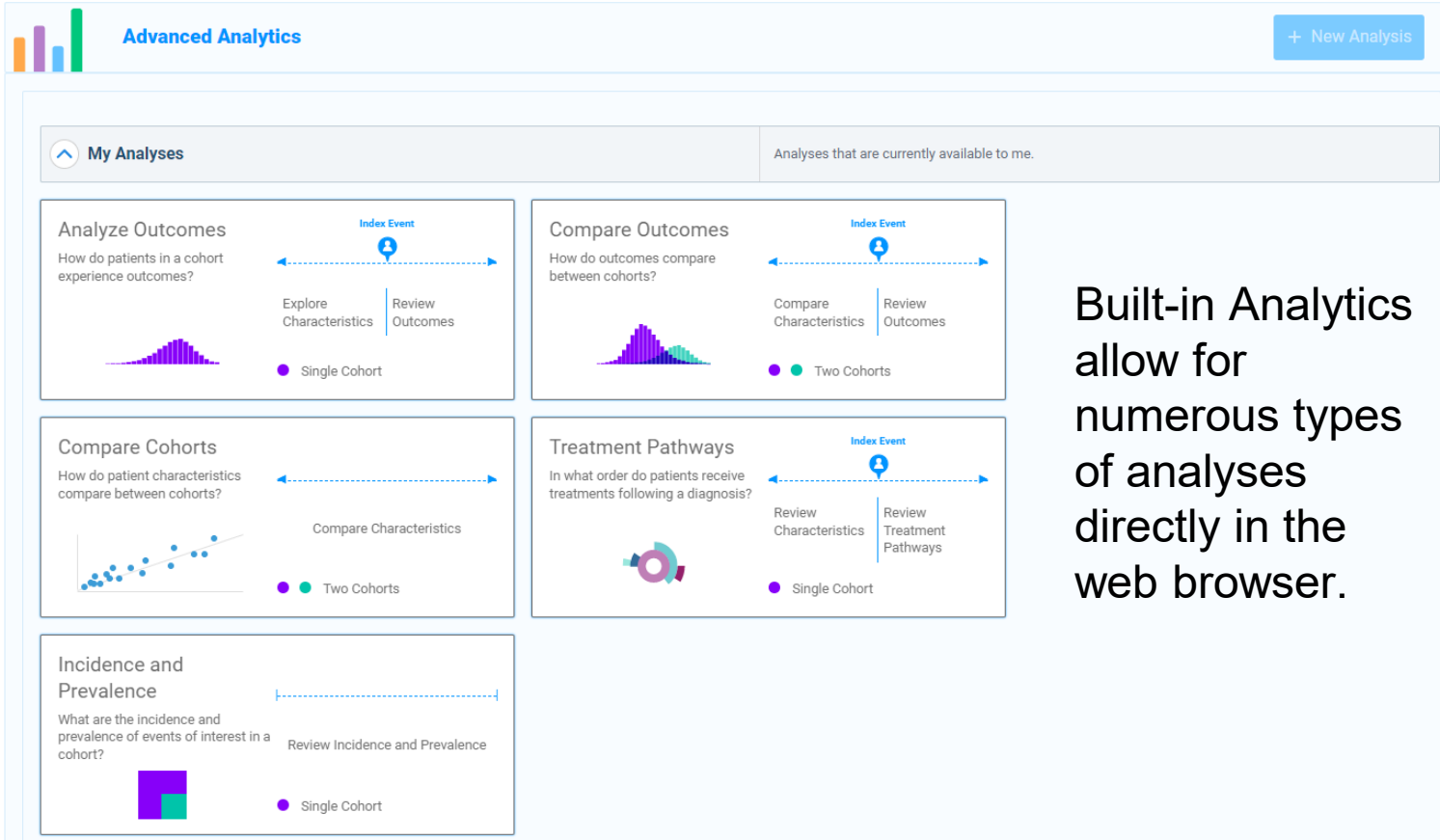

Built-in Analytics allow for numerous types of analyses directly in the web browser.

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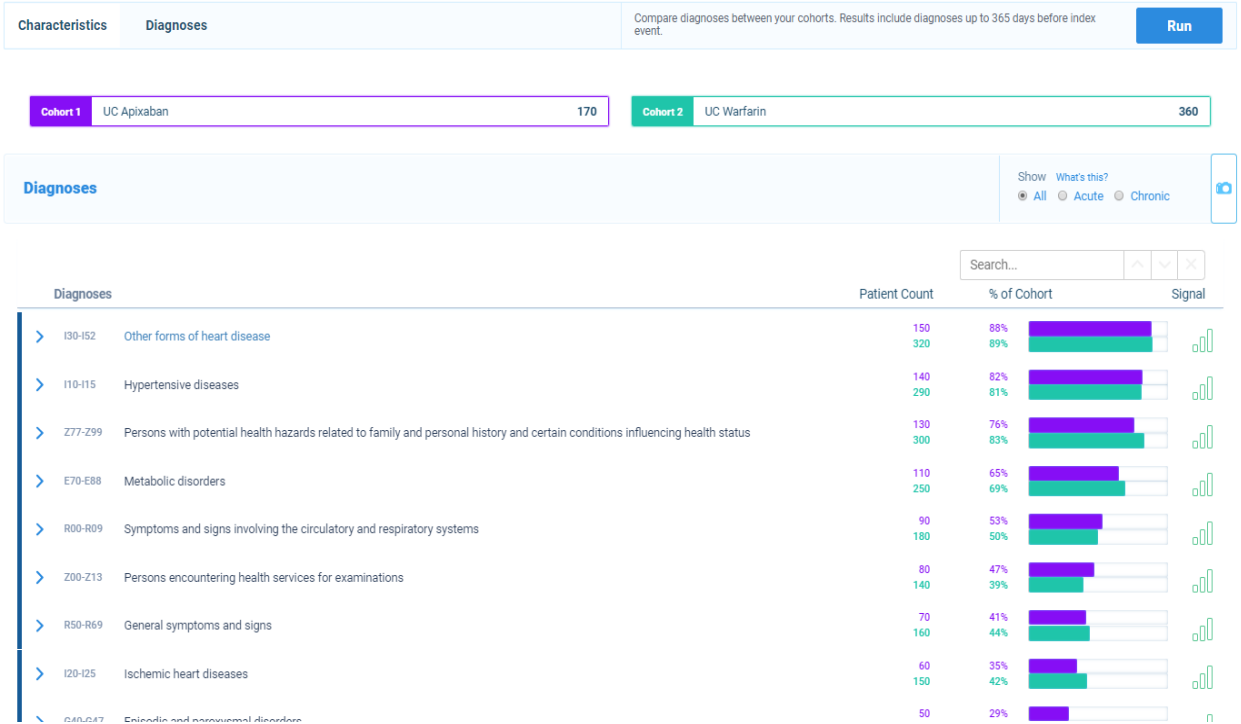
Built-in Outcomes Analysis



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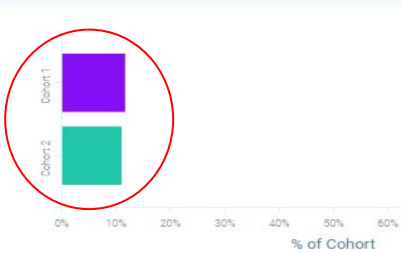
Unnamed Outcome

Must Have Nontraumatic subarachnoid hemorrhage OR Other and unspecified nontraumatic intracranial ... OR Cerebrovascular diseases OR Nontraumatic intracerebral hemorrhage

1a : Measures of Association

	Cohort Statistics			Risk Difference				Risk Ratio		Odds Ratio	
Cohort	Patients in Cohort	Patients with Outcome	Risk	Risk Difference	95 % CI	z	p	Risk Ratio	95 % CI	Odds Ratio	95 % CI
1 UC Apixaban	170	20	11.765%	0.654%	(-5.177%,6.484%)	0.222	0.8246	1.059	(0.639,1.754)	1.067	(0.603,1.888)
2 UC Warfarin	360	40	11.111%								



Must Have INR in Plasma or Blood

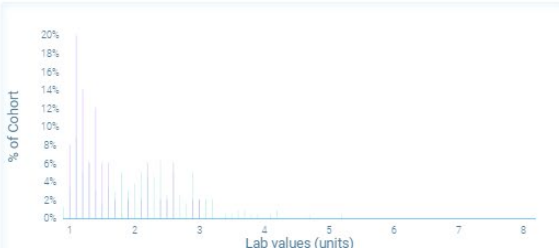
2a : Lab Distribution

	Cohort Statistics				Test Statistics		
Cohort	Patients in Cohort	Patients with Outcome	Mean	Standard Deviation	t	df	p
1 UC Apixaban	170	50	1.549	0.559			
2 UC Warfarin	360	240	2.078	0.794	-4.436	278	< 0.0001

* For Cohort 1, 10 data points for 10 patients were excluded because they fell outside the sanitization limit; of the 10 patients, 0 patients had no other lab in the time window.

* For Cohort 2, 50 data points for 20 patients were excluded because they fell outside the sanitization limit; of the 20 patients, 0 patients had no other lab in the time window.

Learn more



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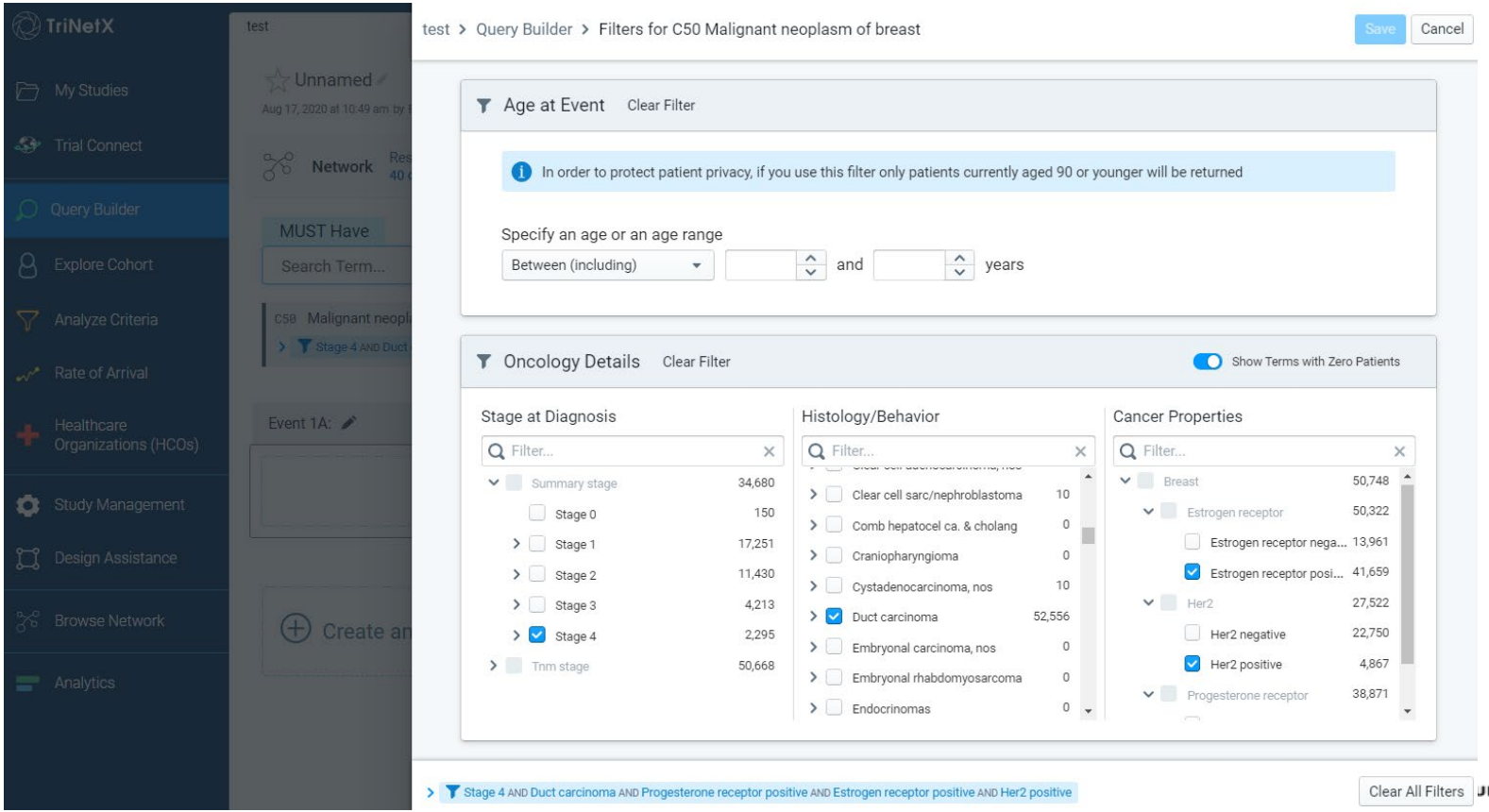
Cancer Staging Data in TriNetX (new)



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Comparative Study > Lancet Psychiatry. 2021 May;8(5):416-427.

doi: 10.1016/S2215-0366(21)00084-5. Epub 2021 Apr 6.

6-month neurological and psychiatric outcomes in 236 379 survivors of COVID-19: a retrospective cohort study using electronic health records

Maxime Taquet [1], John R Geddes [1], Masud Husain [2], Sierra Luciano [3], Paul J Harrison [4]

Affiliations + expand

PMID: 33836148 PMCID: PMC8023694 DOI: 10.1016/S2215-0366(21)00084-5

Free PMC article

Abstract

Background: Neurological and psychiatric sequelae of COVID-19 have been reported, but more data are needed to adequately assess the effects of COVID-19 on brain health. We aimed to provide robust estimates of incidence rates and relative risks of neurological and psychiatric diagnoses in patients in the 6 months following a COVID-19 diagnosis.

Methods: For this retrospective cohort study and time-to-event analysis, we used data obtained from the TriNetX electronic health records network (with over 81 million patients). Our primary cohort comprised patients who had a COVID-19 diagnosis; one matched control cohort included patients diagnosed with influenza, and the other matched control cohort included patients diagnosed with any respiratory tract infection including influenza in the same period. Patients with a diagnosis of COVID-19 or a positive test for SARS-CoV-2 were excluded from the control cohorts. All cohorts included patients older than 10 years who had an index event on or after Jan 20, 2020, and who were still alive on Dec 13, 2020. We estimated the incidence of 14 neurological and psychiatric outcomes in the 6 months after a confirmed diagnosis of COVID-19: intracranial haemorrhage; ischaemic stroke; parkinsonism; Guillain-Barré syndrome; nerve, nerve root, and plexus disorders; myoneural junction and muscle disease; encephalitis; dementia; psychotic, mood, and anxiety disorders (grouped and separately); substance use disorder; and insomnia. Using a Cox model, we compared incidences with those in propensity score-matched cohorts of patients with influenza or other respiratory tract infections. We investigated how these estimates were affected by COVID-19 severity, as proxied by hospitalisation, intensive therapy unit (ITU) admission, and encephalopathy (delirium and related disorders). We assessed the robustness of the differences in outcomes between cohorts by repeating

Because UC contributes to the TriNetX platform, researchers can access not only for our local UC Health population, but also over 120M+ patients across the global Research Network.
This is at no cost.*

This is Real-World Evidence

* Except for CHI processing fees if data is needed

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ABOUT OUR SERVICES

- Consultations/Grant Development
- Data from Epic
- Research Recruitment
- Custom Software Development
- Data Science/Visualization
- Data Collection using REDCap

CHI Terms of Service

CHI Data Use Agreement

Study Feasibility & Publishing using TriNetX

UC and UC Health partners with TriNetX (Cambridge, MA) as part of its large and growing distributed EHR data network. Through CHI, UC Health shares its de-identified data to TriNetX along with 100+ other institutions. This self-service or CHI-assisted tool is the standard method to find cohorts for research. The CHI can reverse-engineer queries on the UC Health network for identifiable data contingent on individual IRB approvals. The primary use for this is subject recruitment.*

UC is also part of the TriNetX Research Network (TRN). The traditional access to data for sites is to see only their own data – this is an ideal for researchers to view the UC Health patient population. The TRN extends the view to other healthcare organizations data who are part of this large, global network. The scale is immense – UC Health has about 1.2 million patients, the TRN has over 80 million. The TRN is primarily for disease prevalence or outcomes analysis using Real World Evidence (RWE).

TriNetX is a self-service tool for researchers. The fees associated with this service is for the CHI to help you access data should you need that. Anything beyond this is priced depending on complexity.

You can learn more about TriNetX and request user credentials on the CCTST website. You will first need to create a free CCTST membership if not already a member.

Join the CCTST
Request TriNetX User Credentials

Pricing

Non-CCTST Member $356.00
CCTST Members $178.00
See the CHI Terms of Service for more details. You will receive a Work Order with the final price before work is started.50% CCTST subsidy applied until funds depleted.***We provide discounts on many services to CCTST members.*** Create your free CCTST account today!

Add to cart

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Accessing data from TriNetX and publishing guidelines

For security reasons, this access this document, users must be logged into the CHI Portal.

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Introduction

TriNetX is the global health research network enabling healthcare organizations, biopharma, and contract research organizations (CROs) to collaborate, enhance trial design, accelerate recruitment, and bring new therapies to market faster.

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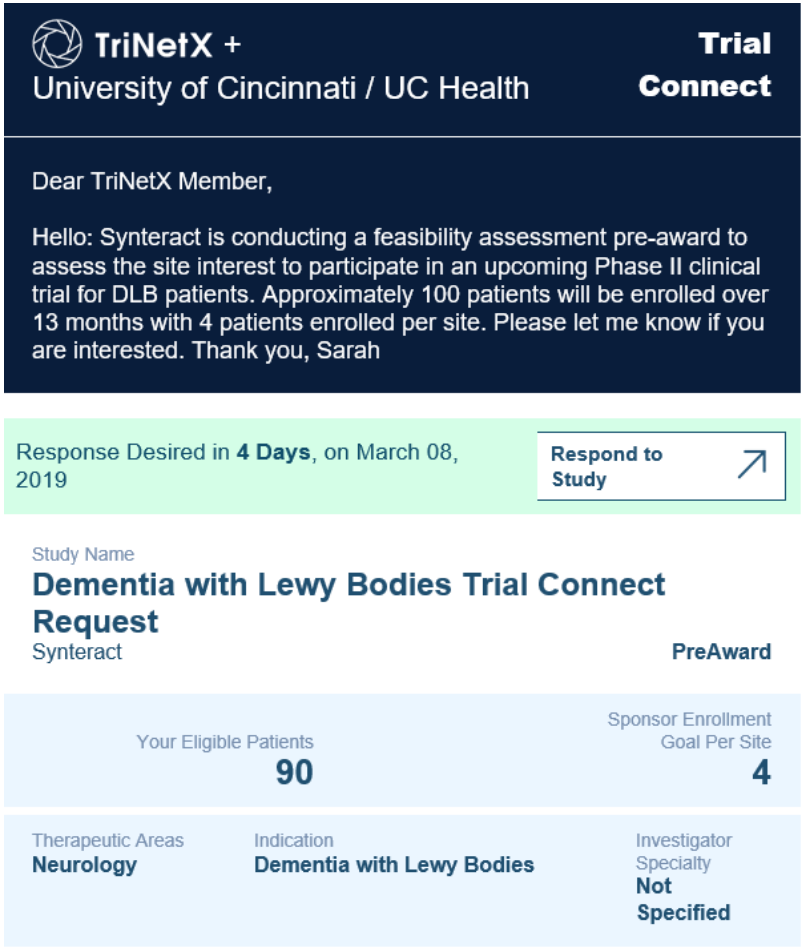

TriNetX + University of Cincinnati / UC Health

Trial Connect

Dear TriNetX Member,

Hello: Synteract is conducting a feasibility assessment pre-award to assess the site interest to participate in an upcoming Phase II clinical trial for DLB patients. Approximately 100 patients will be enrolled over 13 months with 4 patients enrolled per site. Please let me know if you are interested. Thank you, Sarah

Response Desired in **4 Days**, on March 08, 2019

Respond to Study

Study Name

Dementia with Lewy Bodies Trial Connect Request

Synteract

PreAward

Your Eligible Patients: **90**

Sponsor Enrollment Goal Per Site: **4**

Therapeutic Areas: **Neurology**

Indication: **Dementia with Lewy Bodies**

Investigator Specialty: **Not Specified**

Use Case 1: UC has been offered almost 150 trials since 2015, taken about a third.

Use Case 2: Local Identification of cohorts – self-service (i2b2 sidelined)

Use Case 3: Publishing based on Research Network data (online or downloadable) RWD

Use Case 4: Metrics for our CTSA

Use Case 5: Onramp for populating N3C

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National COVID Cohort Collaborative

COVID-19 poses societal challenges that require **expeditious data and knowledge sharing**. Though **medical records are abundant, they are largely inaccessible to outside researchers**. **Statistical, machine learning, and causal research** are most successful with large datasets beyond what is available in any given organization.

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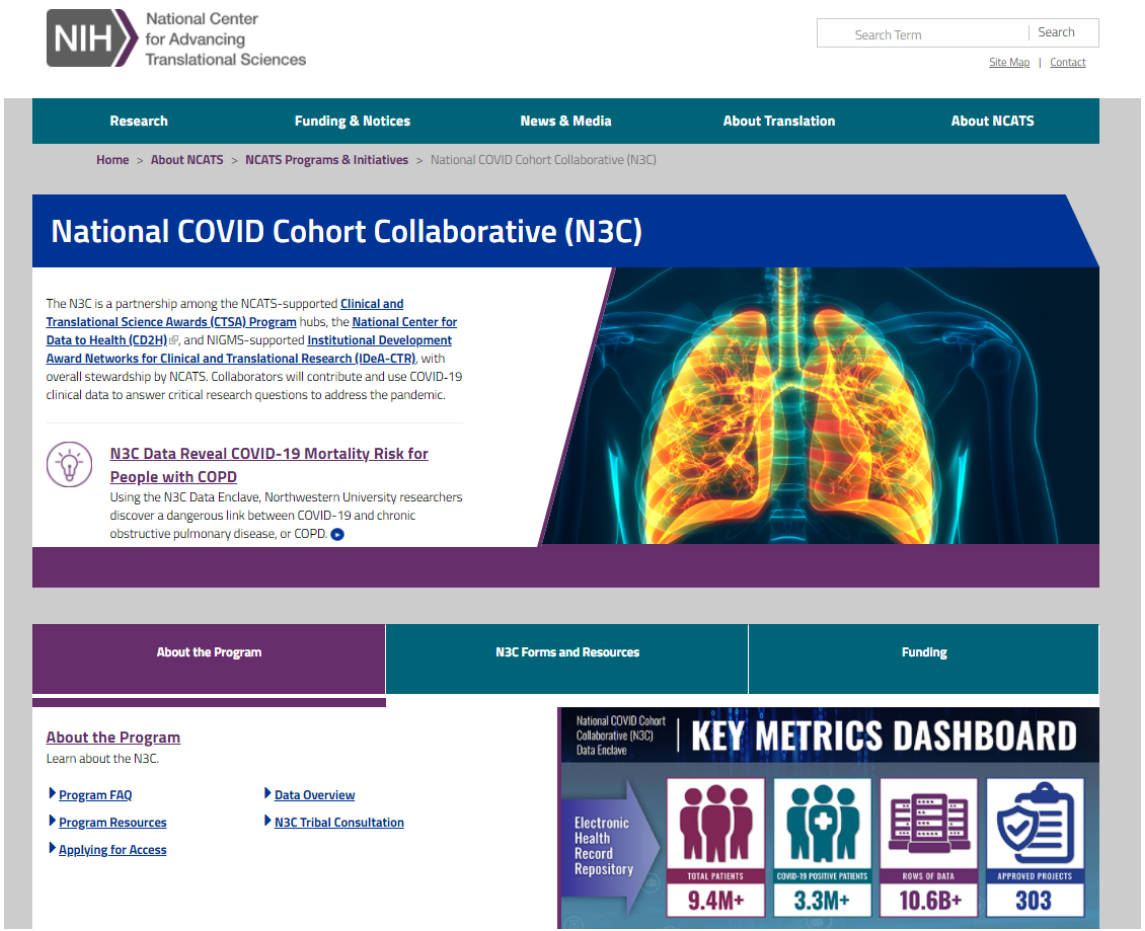

Partners:

NCATS & CD2H

NIH National Center for Advancing Translational Sciences

pcornet

ACT The ACT Network Powered by NCATS CTSA Program

OHDSI Observational Health Data Sciences and Informatics

TriNetX

University of Cincinnati

Currently 285 institutions subscribed

DUA Signatories

If your institution is not on the list, consult your institutional official to determine if a DUA is in place. Institutions can submit a DUA to NCATS by downloading and filling out this form and emailing it to NCATSPartnerships@mail.nih.gov.

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How Do I Acquire Access?

Submit a User Request via the CCTST portal,
https://chi.uc.edu/cctst/trinetx

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Questions?