

Chest x-ray data available through DataDirect

Using [DataDirect](#), researchers can get information about the timing and sequence of a patient's chest x-rays (CXR). [DataDirect](#) is a self-serve software tool enabling researchers to access and explore clinical data. It includes information from the electronic health records (EHR) of more than 4 million unique patients, the [Michigan Genomics Initiative](#) cohort and the Michigan Medical School [Central Biorepository](#).

1. Login into DataDirect and select **Create a New Query**. From the **Populations** cohort discovery tool, add the **Chest X-Ray Patients** population. This will limit your query to patients with chest x-rays available in the repository.

**M DATADIRECT**

Cohort Discovery Tool

- Upload List
- Populations**
- Demographics
- Encounters
- Comorbidities
- Diagnoses
- Procedures
- Outpatient Medications
- Medication Administration
- Laboratory
- Orders

Output View Selection

- Search All Views
- Demographic
- Direct Patient Identifiers
- Encounter

### Populations

Available Populations

<b>Biorepository Patients</b> Any patient that has a biosample (blood, urine, tissue, etc) stored in the UM central biorepository, regardless of sample type or originating study.	Add this population
<b>Chest X-Ray Patients</b> Patients for whom researchers can obtain chest x-ray images.	Add this population
<b>COVID-19 Patients</b> Patients who have tested positive for SARS-CoV-2 at Michigan Medicine or who at any point carried a diagnosis of COVID-19 (ICD-10: U07.1 or U07.2). This includes inpatients and outpatients.	Add this population
<b>COVID-19 Vaccinations</b> Patients who have received a COVID-19 vaccination	Add this population
<b>Diabetes Registry</b> Living Michigan Medicine patients with diabetes (identified on Problem List) majority of whom are managed for diabetes by ambulatory care (Primary Care, MEND, or Pediatric Endocrinology).	Add this population

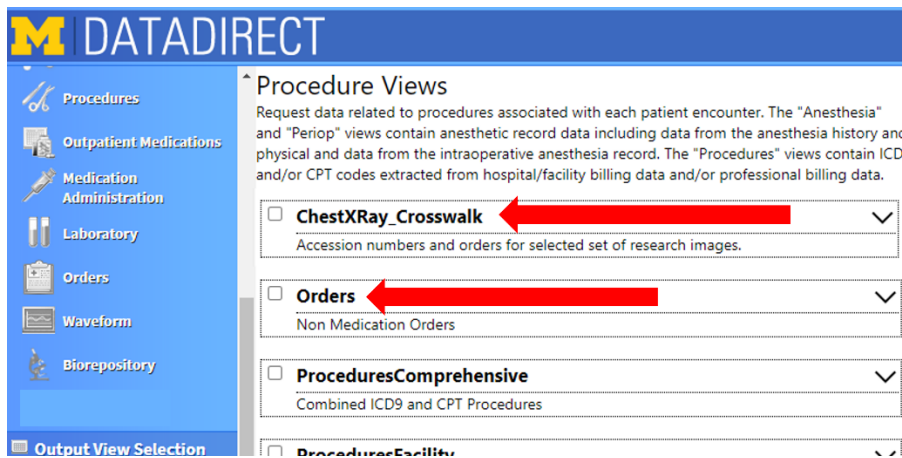
Selected populations

Require patients to be in  of the following:

- Chest X-Ray Patients**  
Patients for whom researchers can obtain chest x-ray images.

Cancel Add

2. Under Output View Selection, select **Procedure**. Expand the **ChestXRy\_Crosswalk** and **Orders** output menus.



- In ChestXRay\_Crosswalk, under **Column Description**, click on the variable name to display the green plus + sign. The green plus sign indicate that variable will be included in the query results. *Note: DeID\_PatientID, DeIDEncounterID, DeIDProcedure\_ID and AccessionNumberPH must be exported to properly join the EHR data to the radiology images.*

**ChestXRay\_Crosswalk**  
[\[ for selected encounters \]](#)

Accession numbers and orders for selected set of research image

**Column Description**

- + DeID\_PatientID: undefined
- + DeID\_EncounterID: undefined
- + DeID\_ProcedureID: undefined
- + AccessionNumberPH: undefined
- + StudyInstanceUID: undefined
- + StudyDescription: undefined
- + SeriesInstanceUID: undefined
- + SeriesDescription: undefined
- + BodyPartExamined: undefined
- + Modality: undefined
- + ProtocolName: undefined
- + SeriesNumber: undefined
- + Laterality: undefined
- + PatientPosition: undefined
- + SOPInstanceUID: undefined
- + KVP: undefined
- + DistanceSourceToDetector: undefined
- + DistanceSourceToPatient: undefined
- + DetectorType: undefined
- + ImageType: undefined
- + ViewPosition: undefined
- + PatientOrientation: undefined
- + ImageLaterality: undefined
- + InstanceNumber: undefined
- + AcquisitionDeviceProcessingDescription: undefined
- + Manufacturer: undefined
- + ManufacturerModelName: undefined
- + PhotometricInterpretation: undefined
- + Rows\_dcm: undefined
- + Columns\_dcm: undefined
- + WindowCenter: undefined
- + WindowWidth: undefined
- + LossyImageCompression: undefined
- + SOPClassUID: undefined
- + BitsAllocated: undefined
- + BitsStored: undefined
- + HighBit: undefined
- + FileSizeBytes: undefined
- + FileLocationWinVM: undefined
- + FileLocationLinuxVM: undefined

- In the Orders view under Column Description, select ProcedureOrderID in addition to the pre-selected DeID\_PatientID and DeID\_EncounterID.

**Orders** ^

[\[ for selected encounters \]](#) [\[ 0 filters enabled \]](#)

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Non Medication Orders

**Column Description**

- + DeID\_PatientID: undefined
- + DeID\_EncounterID: undefined
- ✖ **isCanceled**: Boolean field containing ?1? if the order was canceled, ?0? if the order was not canceled, and null if no order status information is available.
- + **ProcedureOrderID**: This is the unique RDW identifier assigned to the order.
- ✖ **OrderTermID**: This is the unique term identifier for the order.
- ✖ **OrderName**: This is the order caption visible within MiChart, it is not the full text of the order.
- ✖ **OrderType**: This is the category of the order, e.g. imaging, nursing, etc.
- ✖ **DeID\_OrderDate**: undefined
- ✖ **DeID\_OrderStart**: undefined
- ✖ **DeID\_OrderStop**: undefined
- ✖ **MinDose**: This is the minimum dose.
- ✖ **MaxDose**: This is the maximum dose.

- Select Run Query on the right lower side of the window. Your query has been submitted and you will receive an email when your data file is available on Turbo.

The screenshot shows the DataDirect web application interface. On the left is a navigation menu with categories like Encounters, Comorbidities, Diagnosis, Procedures, etc. The main content area is titled 'Orders' and shows a list of columns with their descriptions. The 'Column Description' section is expanded, showing details for various fields. On the right side, there are several panels: 'Logged in as scholar', 'Current Query (deidentified)', 'Cohort Discovery Results', 'Starting Population', 'Procedures', 'Final Count', 'Cohort Demographics', and 'Selected Output Views'. A red arrow points to the 'Run Query' button at the bottom right of the interface.