**Glaucoma**

**Goal**

The purpose of this phenotype is to study the relationship between diagnoses and medications as indications of glaucoma.

**Approach**

Gather all patients who either have the diagnosis or a relevant medication and find the overlap between the sets.

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**Text description**

Initial Event Cohort

People having any of the following:

* ko foreach: expression().PrimaryCriteria().CriteriaList
* ko with: Criteria a condition occurrence of Glaucoma diagnosis2
* ko if: ko.utils.unwrapObservable(First) != null /ko ko if: ko.utils.unwrapObservable(OccurrenceStartDate) != null /ko ko if: ko.utils.unwrapObservable(OccurrenceEndDate) != null /ko ko if: ko.utils.unwrapObservable(ConditionType) != null /ko ko if: ko.utils.unwrapObservable(StopReason) != null /ko ko if: ko.utils.unwrapObservable(ConditionSourceConcept) != null /ko ko if: ko.utils.unwrapObservable(Age) != null /ko ko if: ko.utils.unwrapObservable(Gender) != null /ko ko if: ko.utils.unwrapObservable(ProviderSpecialty) != null /ko ko if: ko.utils.unwrapObservable(VisitType) != null /ko ko if: ko.utils.unwrapObservable(CorrelatedCriteria) != null /ko
* /ko
* ko with: Criteria a drug exposure of Antiglaucoma preparations1
* ko if: ko.utils.unwrapObservable(First) != null /ko ko if: ko.utils.unwrapObservable(OccurrenceStartDate) != null /ko ko if: ko.utils.unwrapObservable(OccurrenceEndDate) != null /ko ko if: ko.utils.unwrapObservable(DrugType) != null /ko ko if: ko.utils.unwrapObservable(StopReason) != null /ko ko if: ko.utils.unwrapObservable(Refills) != null /ko ko if: ko.utils.unwrapObservable(Quantity) != null /ko ko if: ko.utils.unwrapObservable(DaysSupply) != null /ko ko if: ko.utils.unwrapObservable(RouteConcept) != null /ko ko if: ko.utils.unwrapObservable(EffectiveDrugDose) != null /ko ko if: ko.utils.unwrapObservable(DoseUnit) != null /ko ko if: ko.utils.unwrapObservable(LotNumber) != null /ko ko if: ko.utils.unwrapObservable(DrugSourceConcept) != null /ko ko if: ko.utils.unwrapObservable(Age) != null /ko ko if: ko.utils.unwrapObservable(Gender) != null /ko ko if: ko.utils.unwrapObservable(ProviderSpecialty) != null /ko ko if: ko.utils.unwrapObservable(VisitType) != null /ko
* ko if: ko.utils.unwrapObservable(CorrelatedCriteria) != null /ko /ko
* /ko

with continuous observation of at least 0 days prior and 0 days after event index date, and limit initial events to: **earliest event per person.**

Inclusion Criteria #1: Antiglaucoma meds

ko if: (description() || '').length > 0 /ko Having all ko if: group().Type().startsWith('AT\_') /ko of the following criteria:

ko foreach: group().DemographicCriteriaList /ko ko foreach: group().CriteriaList

* at least 1 occurrences of ko with: Criteria a drug exposure of Antiglaucoma preparations1
* ko if: ko.utils.unwrapObservable(First) != null /ko ko if: ko.utils.unwrapObservable(OccurrenceStartDate) != null /ko ko if: ko.utils.unwrapObservable(OccurrenceEndDate) != null /ko ko if: ko.utils.unwrapObservable(DrugType) != null /ko ko if: ko.utils.unwrapObservable(StopReason) != null /ko ko if: ko.utils.unwrapObservable(Refills) != null /ko ko if: ko.utils.unwrapObservable(Quantity) != null /ko ko if: ko.utils.unwrapObservable(DaysSupply) != null /ko ko if: ko.utils.unwrapObservable(RouteConcept) != null /ko ko if: ko.utils.unwrapObservable(EffectiveDrugDose) != null /ko ko if: ko.utils.unwrapObservable(DoseUnit) != null /ko ko if: ko.utils.unwrapObservable(LotNumber) != null /ko ko if: ko.utils.unwrapObservable(DrugSourceConcept) != null /ko ko if: ko.utils.unwrapObservable(Age) != null /ko ko if: ko.utils.unwrapObservable(Gender) != null /ko ko if: ko.utils.unwrapObservable(ProviderSpecialty) != null /ko ko if: ko.utils.unwrapObservable(VisitType) != null /ko
* ko if: ko.utils.unwrapObservable(CorrelatedCriteria) != null /ko /ko starting between all days Before and all days After event index date ko if: EndWindow /ko

/ko

* ko foreach: group().Groups /ko

Inclusion Criteria #2: Glaucoma diagnosis

ko if: (description() || '').length > 0 /ko Having all ko if: group().Type().startsWith('AT\_') /ko of the following criteria:

ko foreach: group().DemographicCriteriaList /ko ko foreach: group().CriteriaList

* at least 1 occurrences of ko with: Criteria a condition occurrence of Glaucoma diagnosis2
* ko if: ko.utils.unwrapObservable(First) != null /ko ko if: ko.utils.unwrapObservable(OccurrenceStartDate) != null /ko ko if: ko.utils.unwrapObservable(OccurrenceEndDate) != null /ko ko if: ko.utils.unwrapObservable(ConditionType) != null /ko ko if: ko.utils.unwrapObservable(StopReason) != null /ko ko if: ko.utils.unwrapObservable(ConditionSourceConcept) != null /ko ko if: ko.utils.unwrapObservable(Age) != null /ko ko if: ko.utils.unwrapObservable(Gender) != null /ko ko if: ko.utils.unwrapObservable(ProviderSpecialty) != null /ko ko if: ko.utils.unwrapObservable(VisitType) != null /ko ko if: ko.utils.unwrapObservable(CorrelatedCriteria) != null /ko
* /ko starting between all days Before and all days After event index date ko if: EndWindow /ko

/ko

* ko foreach: group().Groups /ko

Limit qualifying cohort to: **earliest event per person.**

No end date strategy selected. By default, the cohort end date will be the end of the observation period that contains the index event.

ko if: expression().CensoringCriteria().length > 0 /ko

Appendix 1: Concept Set Definitions

ko foreach: sortedConceptSets

1. Antiglaucoma preparations

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Concept Id** | **Concept Name** | **Domain** | **Vocabulary** | **Excluded** | **Descendants** | **Mapped** |
| 21603671 | ANTIGLAUCOMA PREPARATIONS AND MIOTICS | Drug | ATC | NO | YES | NO |

2. Glaucoma diagnosis

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Concept Id** | **Concept Name** | **Domain** | **Vocabulary** | **Excluded** | **Descendants** | **Mapped** |
| 437541 | Glaucoma | Condition | SNOMED | NO | YES | NO |

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**JSON**

{

"ConceptSets": [

{

"id": 0,

"name": "Glaucoma diagnosis",

"expression": {

"items": [

{

"concept": {

"CONCEPT\_ID": 437541,

"CONCEPT\_NAME": "Glaucoma",

"STANDARD\_CONCEPT": "S",

"INVALID\_REASON": "V",

"CONCEPT\_CODE": "23986001",

"DOMAIN\_ID": "Condition",

"VOCABULARY\_ID": "SNOMED",

"CONCEPT\_CLASS\_ID": "Clinical Finding",

"INVALID\_REASON\_CAPTION": "Valid",

"STANDARD\_CONCEPT\_CAPTION": "Standard"

},

"includeDescendants": true

}

]

}

},

{

"id": 1,

"name": "Antiglaucoma preparations",

"expression": {

"items": [

{

"concept": {

"CONCEPT\_ID": 21603671,

"CONCEPT\_NAME": "ANTIGLAUCOMA PREPARATIONS AND MIOTICS",

"STANDARD\_CONCEPT": "C",

"INVALID\_REASON": "V",

"CONCEPT\_CODE": "S01E",

"DOMAIN\_ID": "Drug",

"VOCABULARY\_ID": "ATC",

"CONCEPT\_CLASS\_ID": "ATC 3rd",

"INVALID\_REASON\_CAPTION": "Valid",

"STANDARD\_CONCEPT\_CAPTION": "Classification"

},

"includeDescendants": true

}

]

}

}

],

"PrimaryCriteria": {

"CriteriaList": [

{

"ConditionOccurrence": {

"CodesetId": 0

}

},

{

"DrugExposure": {

"CodesetId": 1

}

}

],

"ObservationWindow": {

"PriorDays": 0,

"PostDays": 0

},

"PrimaryCriteriaLimit": {

"Type": "First"

}

},

"QualifiedLimit": {

"Type": "First"

},

"ExpressionLimit": {

"Type": "First"

},

"InclusionRules": [

{

"name": "Antiglaucoma meds",

"expression": {

"Type": "ALL",

"CriteriaList": [

{

"Criteria": {

"DrugExposure": {

"CodesetId": 1

}

},

"StartWindow": {

"Start": {

"Coeff": -1

},

"End": {

"Coeff": 1

}

},

"Occurrence": {

"Type": 2,

"Count": 1

}

}

],

"DemographicCriteriaList": [],

"Groups": []

}

},

{

"name": "Glaucoma diagnosis",

"expression": {

"Type": "ALL",

"CriteriaList": [

{

"Criteria": {

"ConditionOccurrence": {

"CodesetId": 0

}

},

"StartWindow": {

"Start": {

"Coeff": -1

},

"End": {

"Coeff": 1

}

},

"Occurrence": {

"Type": 2,

"Count": 1

}

}

],

"DemographicCriteriaList": [],

"Groups": []

}

}

],

"CensoringCriteria": []

}

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7909: 12.6% Both

20835: 33.2% Dxs = 7909 / 7909+34048 = 19%

34048: 55.2% Meds = 7909 / 7909+20833 = 28%

62792: 100% Total (24% sens)