

`MATCH(n) return labels(n) as node_labels, count(n) as counts`

`match (p:Phenotype) return p limit 10 - gives knowledge graph with 10 nodes`

code: HPO:0000495 ; term: Recurrent corneal erosions
code: HPO:0005829 ; term: Maldevelopment of radioulnar joint
code: HPO:0011328 ; term: Abnormality of fontanelles
code: HPO:0100491 ; term: Abnormality of lower limb joint
code: HPO:0500117 ; term: Abnormal CSF urate concentration
code: HPO:0000490 ; term: Enophthalmos
code: HPO:0410234 ; term: Increased anti-parasite IgE antibody level
code: HPO:0032021 ; term: Eosinophilic liver infiltration
code: HPO:0000031 ; term: Epididymitis

THIS IS THE CODE, WE WANT THE TERM:

`match (p:Phenotype{code:'HPO:0006881'}) return p.term`

THIS IS THE TERM, WE WANT THE CODE:

`match (p:Phenotype{term:'Diffuse peripheral demyelination'}) return p.code`

QUERY QUESTIONS:

What is the name of the phenotype for the code HPO:0000495?

`match (p:Phenotype{code:'HPO:0000495'}) return p.term`

Recurrent corneal erosions

What is the name of the phenotype for the code HPO:0410234?

`match (p:Phenotype{code:'HPO:0410234'}) return p.term`

Increased anti-parasite IgE antibody level

What is the name of the phenotype for the code HPO:0500117?

`match (p:Phenotype{code:'HPO:0500117'}) return p.term`

Abnormal CSF urate concentration

What's the HPO code associated with Enophthalmos?

`match (p:Phenotype{term:'Enophthalmos'}) return p.code`

HPO:0000490

What's the HPO code associated with Eosinophilic liver infiltration?

`match (p:Phenotype{term:'Eosinophilic liver infiltration'}) return p.code`

HPO:0032021

```
MATCH(n) return labels(n) as node_labels, count(n) as counts
match (p:Disease) return p limit 10
```

code: DOID:7598 ; term: cervical lymphoepithelioma-like carcinoma
code: DOID:1973 ; term: fallopian tube adenosarcoma
code: DOID:6511 ; term: glandular pattern ovarian yolk sac tumor
code: DOID:6613 ; term: vaginal villous adenoma
code: DOID:11282 ; term: solar retinopathy
code: DOID:0060186 ; term: chemical colitis
code: DOID:2123 ; term: tularemia
code: DOID:2078 ; term: chondroid syringoma of the vulva
code: DOID:7269 ; term: cribriform variant testicular seminoma
code: DOID:7302 ; term: endodermal sinus pattern testicular yolk sac tumor

QUERIES:

What is the disease associated with the code DOID:7598?

```
match (p:Disease{code:'DOID:7598'}) return p.term
cervical lymphoepithelioma-like carcinoma
```

What is the disease associated with the code DOID:2078?

```
match (p:Disease{code:'DOID:2078'}) return p.term
chondroid syringoma of the vulva
```

What code is associated with the Tularemia?

```
match (p:Disease{term:'tularemia'}) return p.code
DOID:2123
```

SYNONYMOUS CODES AND TERMS

find all the synonymous codes for DOID:1973

```
match (d:Disease {code:'DOID:1973'}) where d.codes_list is not NULL return
d.codes_list
```

Find all the synonymous codes for DOID:2123?

```
match (d:Disease {code:'DOID:2123'}) where d.codes_list is not NULL return d.codes_list
```

```
["ICD9CM:021.8", "EFO:1001444", "DOID:14239", "MONDO:0001916", "MONDO:0018077", "DOID:2123"]
```

Find all the synonymous codes for DOID:11282?

```
match (d:Disease {code:'DOID:11282'}) where d.codes_list is not NULL return d.codes_list
```

```
["HPO:0031420", "MDR:10041305", "ICPC2ICD10ENG:MTHU083187",  
"ICPC2ICD10ENG:MTHU064532", "MEDCIN:36493", "SNOMEDCT_US:1135000",  
"MDR:10038936", "ICD9CM:363.31", "ICD10CM:H31.02", "DOID:11282"]
```

Find all the synonymous codes for HPO:0000495?

```
match (d:Phenotype {code:'HPO:0000495'}) where d.codes_list is not NULL return  
d.codes_list
```

```
["HPO:0000495"]  
["OMIM:MTHU024135", "OMIM:MTHU036632", "OMIM:MTHU013569", "HPO:0000495"]
```

Find all the synonymous codes for Abnormality of fontanelles?

```
match (d:Phenotype {term:'Abnormality of fontanelles'}) where d.codes_list is not NULL  
return d.codes_list
```

```
["HPO:0011328"]
```

Find all the synonymous codes for chemical colitis?

```
match (d:Disease {term:'chemical colitis'}) where d.codes_list is not NULL return  
d.codes_list
```

```
["ICD9CM:558", "MONDO:0000706", "ICD9CM:558.9", "ICD10CM:K52", "DOID:0060187",  
"MONDO:0000707", "DOID:0060186"]
```

Find all the synonymous codes for Epididymitis?

```
match (d:Phenotype {term:'Epididymitis'}) where d.codes_list is not NULL return  
d.codes_list
```

```
["OMIM:MTHU038084", "HPO:0000031"]
```

Find all synonymous terms for the code: DOID:6613?

```
match (d:Disease {code:'DOID:6613'}) where d.terms_list is not NULL return d.terms_list
```

```
["vaginal villous adenoma", "vagina villous adenoma", "Vaginal Villous Adenoma"]
```

Find all synonymous terms for the code: HPO:0000495?

match (d:Phenotype {code:'HPO:0000495'}) where d.terms_list is not NULL return d.terms_list

["Epithelial corneal erosions", "Recurrent corneal erosions", "Recurrent corneal ulceration", "Recurrent corneal ulcerations", "Recurrent breakdown of clear protective layer of eye", "Corneal erosions, recurrent"]

Find all the synonymous terms for fallopian tube adenocarcinoma?

match (d:Disease {term:'fallopian tube adenocarcinoma'}) where d.terms_list is not NULL return d.terms_list

["Fallopian Tube Müllerian Adenocarcinoma", "Fallopian Tube Adenocarcinoma", "Fallopian Tube Müllerian Adenocarcinoma", "fallopian tube adenocarcinoma", "fallopian tube müllerian adenocarcinoma", "adenocarcinoma of fallopian tube", "fallopian tube müllerian adenocarcinoma"]

Find all the synonymous terms for chondroid syringoma of the vulva?

match (d:Disease {term:'chondroid syringoma of the vulva'}) where d.terms_list is not NULL return d.terms_list

["Chondroid Syringoma of the Vulva", "Vulvar Chondroid Syringoma", "Benign Mixed Tumor of the Vulva", "benign mixed tumor of the vulva", "chondroid syringoma of the vulva"]

Find all the synonymous terms for Enophthalmos?

match (d:Phenotype {term:'Enophthalmos'}) where d.terms_list is not NULL return d.terms_list

["Enophthalmia", "Enophthalmos", "Sunken eye", "Ocular depression", "Deep-set eyes", "Deep set eye", "Sunken eyes", "Deeply set eye"]

