# PHOEBE 2.0: CREATING COMPREHENSIVE CONCEPT SETS

#### Now with:

- enhanced lexical match (with lemmatization, bigrams, conversion to a common part of speech, tf-idf and pairwise cosine similarity)
- patient context (pairwise cosine similarity based on the vectors of the concept co-occurring with a given concept)

#### Use with:

- Counts from the network
- Your own counts

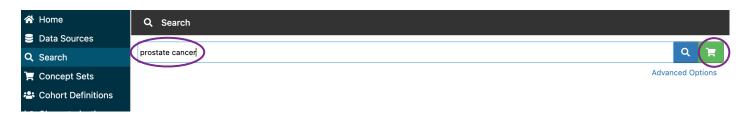
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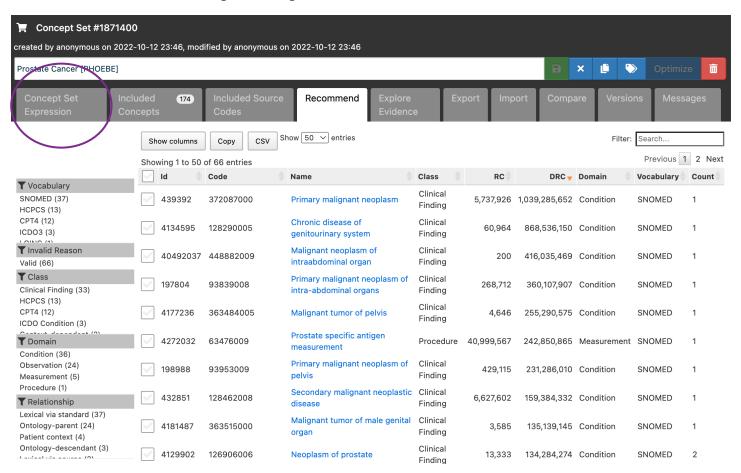
### Go to <u>atlas-demo.ohdsi.org</u>.

# Option 1: start with a string

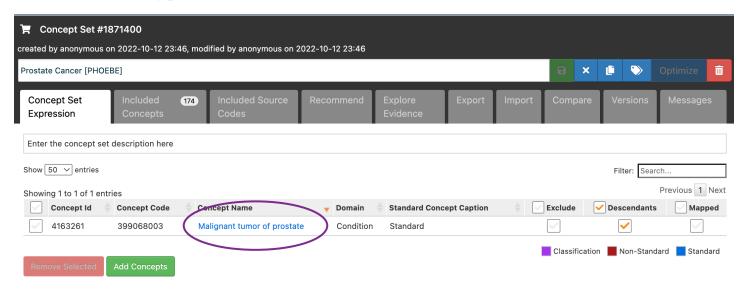
Type your string into Search tab and click on the shopping card



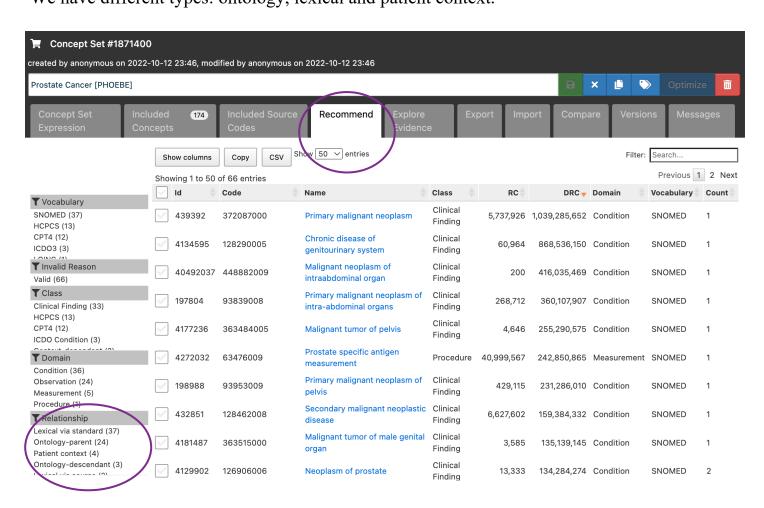
You will be directed to a new concept set (don't forget to name it!) with the recommendations. But first, click on the Concept Set Expression



### This is your starting point:

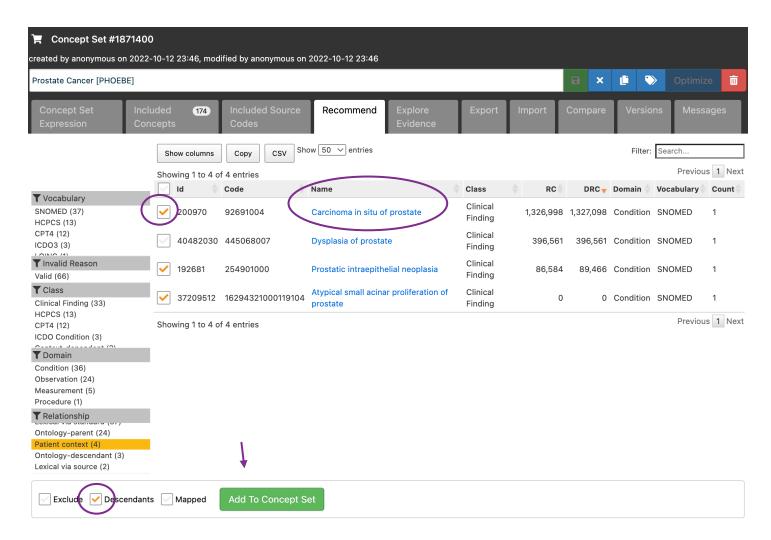


Now, let's check out the recommendations. We have different types: ontology, lexical and patient context.

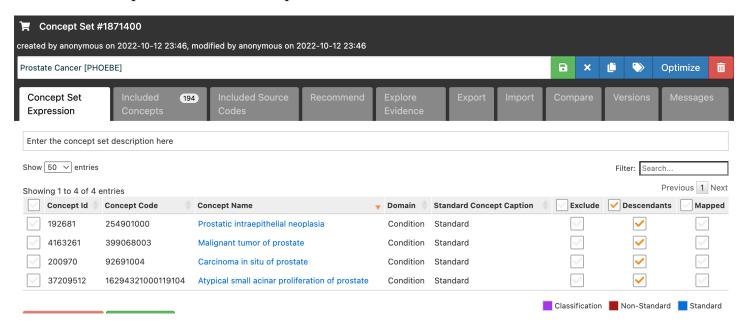


You can examine them separately or together. The concepts are ordered by the record count with descendants (counts are coming from the 22 data sources in the OHDSI network, but you can also change it to your data source in Configuration in your Atlas instance).

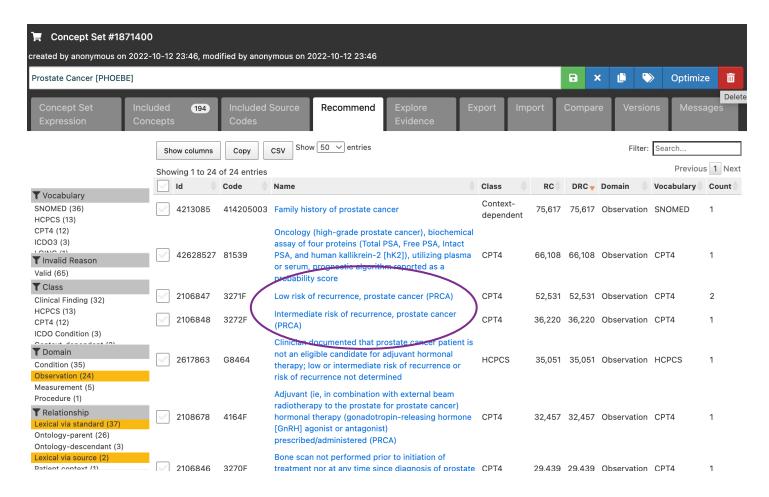
For example, let's look at the recommendations coming from the patient context. Let's add some of them:



## Now our concept set has new concepts:

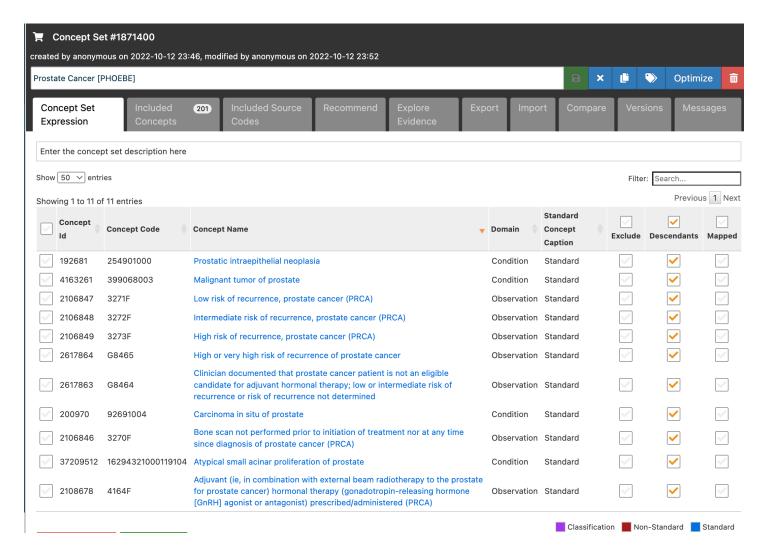


And we have more recommendations for updated concept set. For example, these lexical recommendations:



We can add it, optimize the concept set and repeat until we get a concept set that we feel good about.

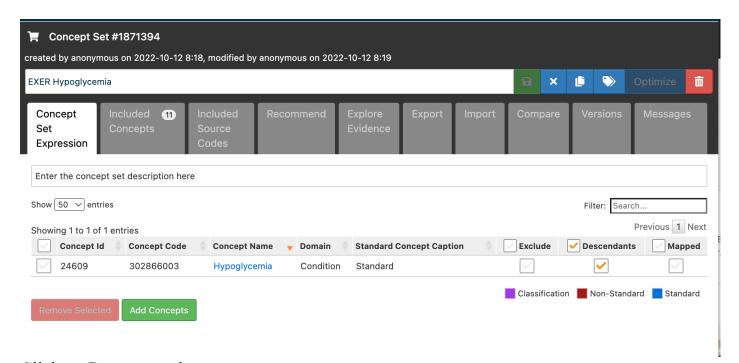
For example, it can look like this (malignant neoplasms and borderline cancer):



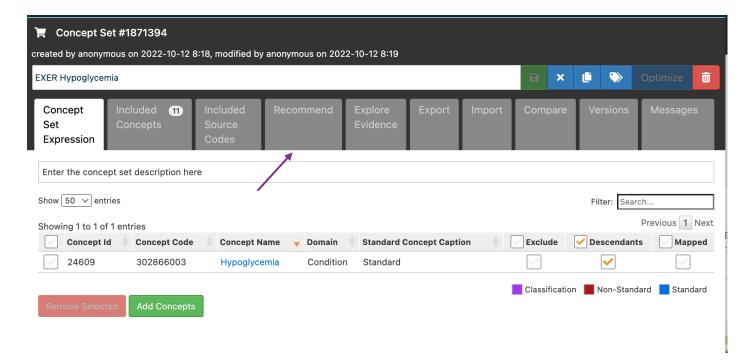
## Option 2: start with an existing concept set

You can follow the same process with each concept set that you already created. Note that the recommendations are only generated for standard concepts.

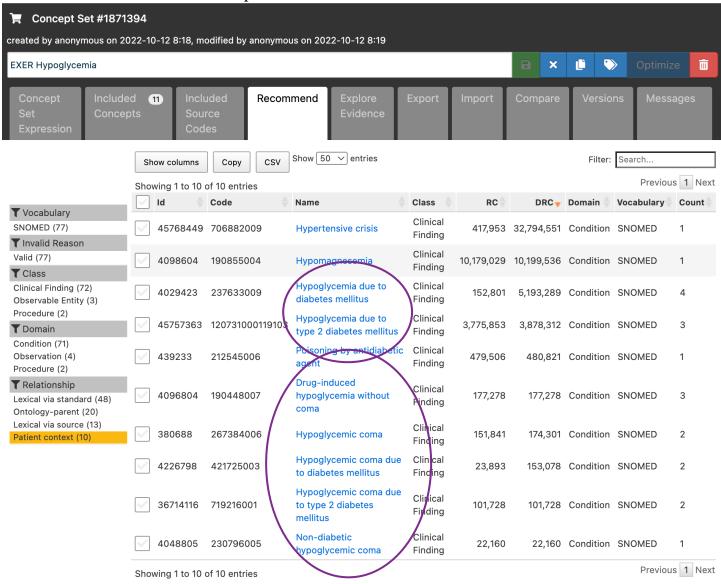
For example, this randomly selected Atlas concept set:



#### Click on Recommend:



#### We can see some relevant concepts!



You can add them to the concept set and iterate as described in the option 1.