**Session 2 Exercises**

**Exercise 1: We want to query the SNOMED CT concept Injury of renal artery (SCT concept 18796000). We know the OMOP concept id for this is 192767. How would we query this in our vocabulary table?**

Solution:

SELECT

\*

FROM

concept

WHERE

concept\_id = 192767;

**Exercise 2: Now we want to select all descendant concepts of Injury of renal artery. How do we do that using just the OMOP vocabulary tables?**

Solution:

SELECT

a.\*

FROM

concept\_ancestor a

WHERE

ancestor\_concept\_id = 192767;

**Exercise 3: Great. Now we want to include the ancestor concept, all of its descendants, and all of the information in the concept table for the previous query are. How would we grab that information?**

Solution:

WITH RECURSIVE Descendants AS (

SELECT

ca.descendant\_concept\_id

FROM

concept\_ancestor ca

WHERE

ca.ancestor\_concept\_id = 192767 -- Your specified concept ID

UNION

SELECT

ca.descendant\_concept\_id

FROM

concept\_ancestor ca

INNER JOIN Descendants ON

ca.ancestor\_concept\_id = Descendants.descendant\_concept\_id

)

SELECT

c.\*

FROM

concept c

INNER JOIN Descendants ON

c.concept\_id = Descendants.descendant\_concept\_id;

**Your turn!**

**Question 4: An investigator wants all medications that include the ingredient tiagabine, which is an anti-convulsive medication. You know the ingredient RxNorm code for this is 31914. You also know that the omop concept id is 715458. How would you query this in the concept table?**

Solution (font is white):

SELECT

\*

FROM

concept

WHERE

concept\_id = 715458;

**Question 5: How would you pull all medications that have this ingredient using just the vocabulary tables?**

Solution (font is white):

SELECT

c.\*

FROM

concept AS c

INNER JOIN

concept\_ancestor AS ca ON c.concept\_id = ca.descendant\_concept\_id

WHERE

ca.ancestor\_concept\_id = 715458;

**Question 6: Going back to our SNOMED CT code, how would we would use the vocabulary tables (hint: you’ll need to use concept\_relationship and concept) to find all 'is a' relationships for injury of renal artery?**

Solution (font is white):

SELECT

cr.relationship\_id,

c1.concept\_id AS 'concept\_id\_1',

c1.concept\_name AS 'concept\_name\_1',

c1.domain\_id AS 'domain\_id\_1',

c1.vocabulary\_id AS 'vocabulary\_id\_1',

c2.concept\_id AS 'concept\_id\_2',

c2.concept\_name AS 'concept\_name\_2',

c2.domain\_id AS 'domain\_id\_2',

c2.vocabulary\_id AS 'vocabulary\_id\_2'

FROM

concept\_relationship cr

JOIN

concept c1 ON cr.concept\_id\_1 = c1.concept\_id

JOIN

concept c2 ON cr.concept\_id\_2 = c2.concept\_id

WHERE

cr.concept\_id\_1 = 192767

AND cr.relationship\_id = 'Is a';