Legend and notes for all TURBO class relationship diagrams

Relationship edge colors

- is subclass of
- an object property
- a data property
- a term annotation property, including referent tracking
- subject of an rdf:Statement
- predicate of an rdf:Statement
- object of an rdf:Statement

Class node colors

- classes
- literal types
- rdf:Statement reifications

This document has one page for each instantiated class in the TURBO semantic repository. That class is drawn as the central hub, and all instantiated classes that have at least one relationships with at least one instance of the hub are drawn as satellites. An edge is drawn for all observed relationships between the hub and each satellite, as well as those between two satellites.

Most satellites of the hub will have additional relationships with further classes that remain unillustrated because those further classes have no relationships directly with the hub. To see those relationships, switch to the page on which the class of interest is, itself, the hub.

Pages which would solely depict a single subclass relationship are omitted.

For each diagram, the class node diameters and property edge widths are proportional to the number of instances of that class (or uses of that property) in the TURBO semantic repository, scaled relative to the other nodes and edges in the diagram.
Subclass edges and their parent nodes are an exception: Their sizes are fixed at a small/narrow size.

When there are two relationships between a pair of class nodes, a single edge with two labels may appear.The node closer to each label is the 'from' node in the relationship.

International Classification of Diseases, Ninth Revision (http://ncicb.nci.nih.gov/xml/owl/EVS/Thesaurus.owl#C71890)

International Classification of Diseases, Ninth Revision

denotes

diagnosis code registry denoter

International Classification of Diseases, Tenth Revision (http://ncicb.nci.nih.gov/xml/owl/EVS/Thesaurus.owl#C71892)
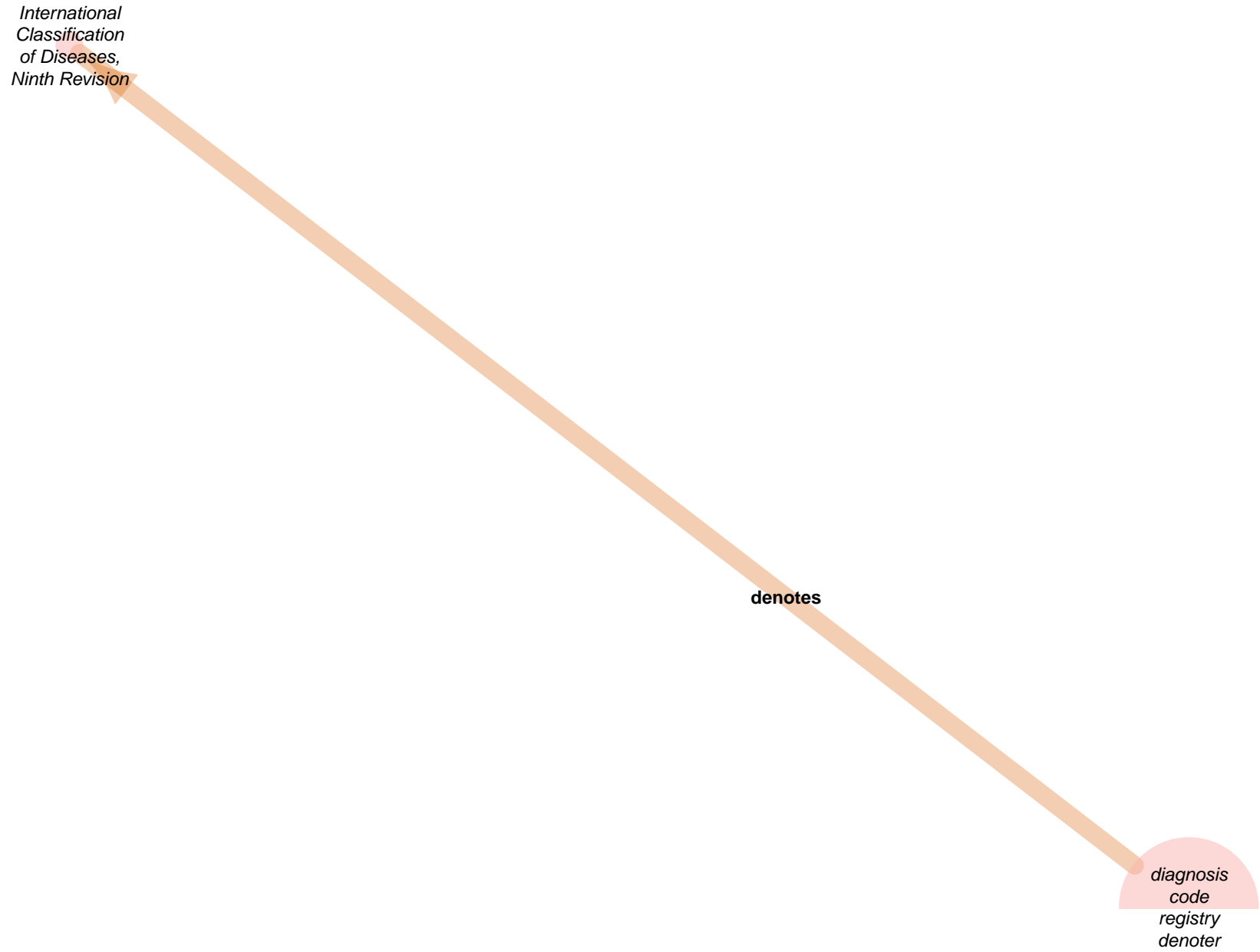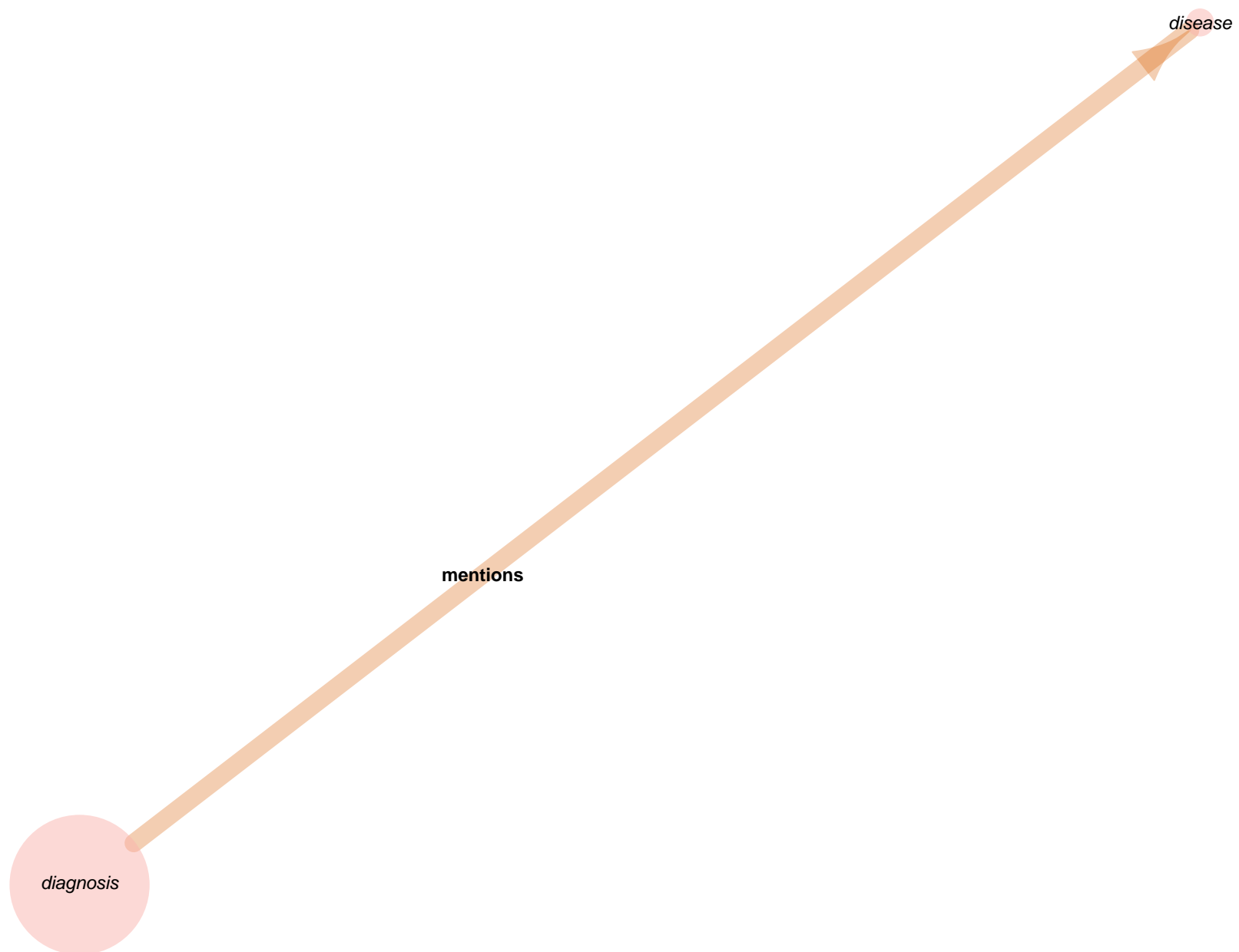
International Classification of Diseases, Tenth Revision

denotes

diagnosis code registry denoter
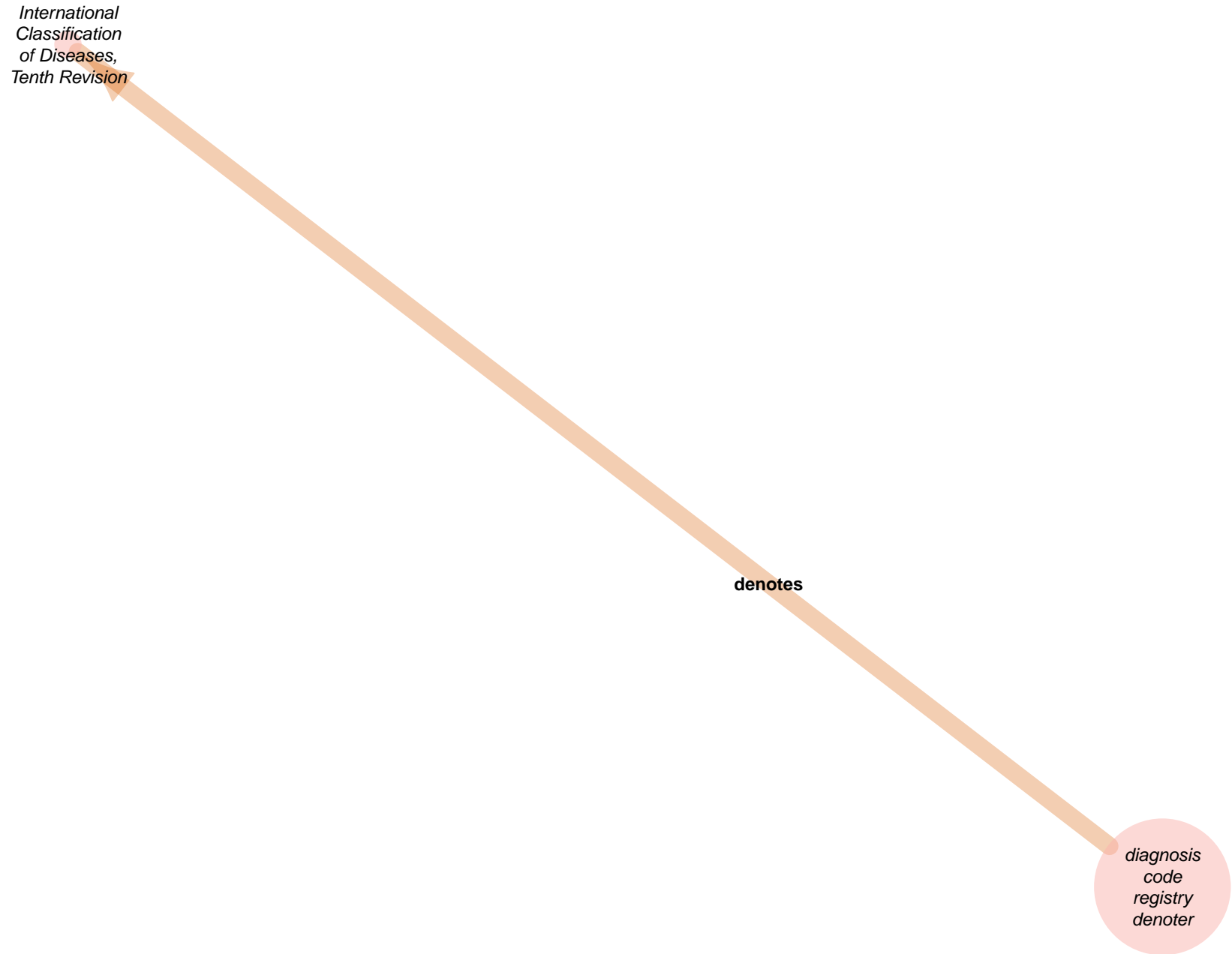
disease (http://purl.obolibrary.org/obo/DOID_4)

disease

mentions

diagnosis

drug product (http://purl.obolibrary.org/obo/DRON_00000005)

drug prescription

mentions

drug product

action specification (http://purl.obolibrary.org/obo/IAO_0000007)

plan

**is
part
of**

*action
specification*

**subclass
of**

**has value
specification**

*directive
information
entity*

*value
specification*
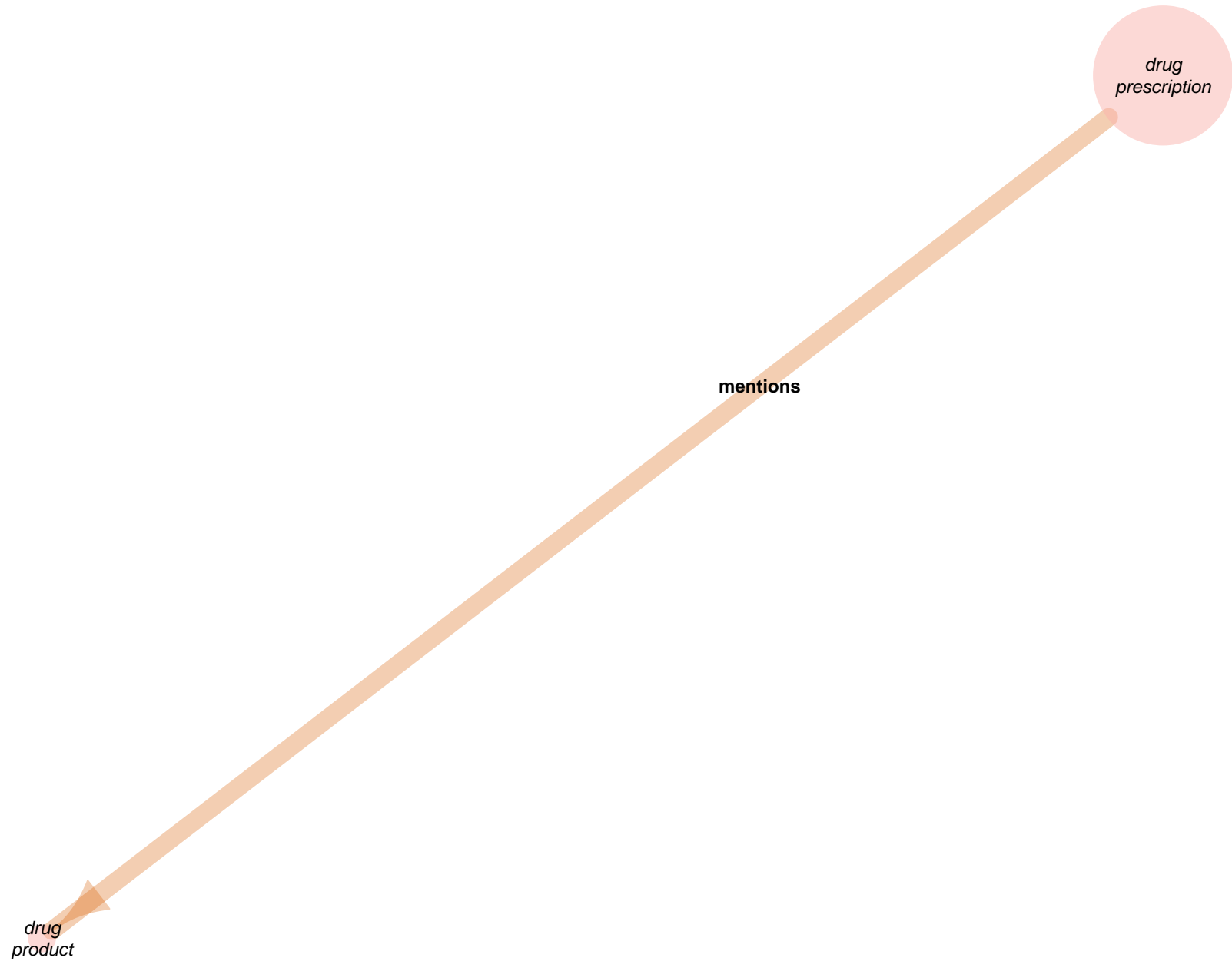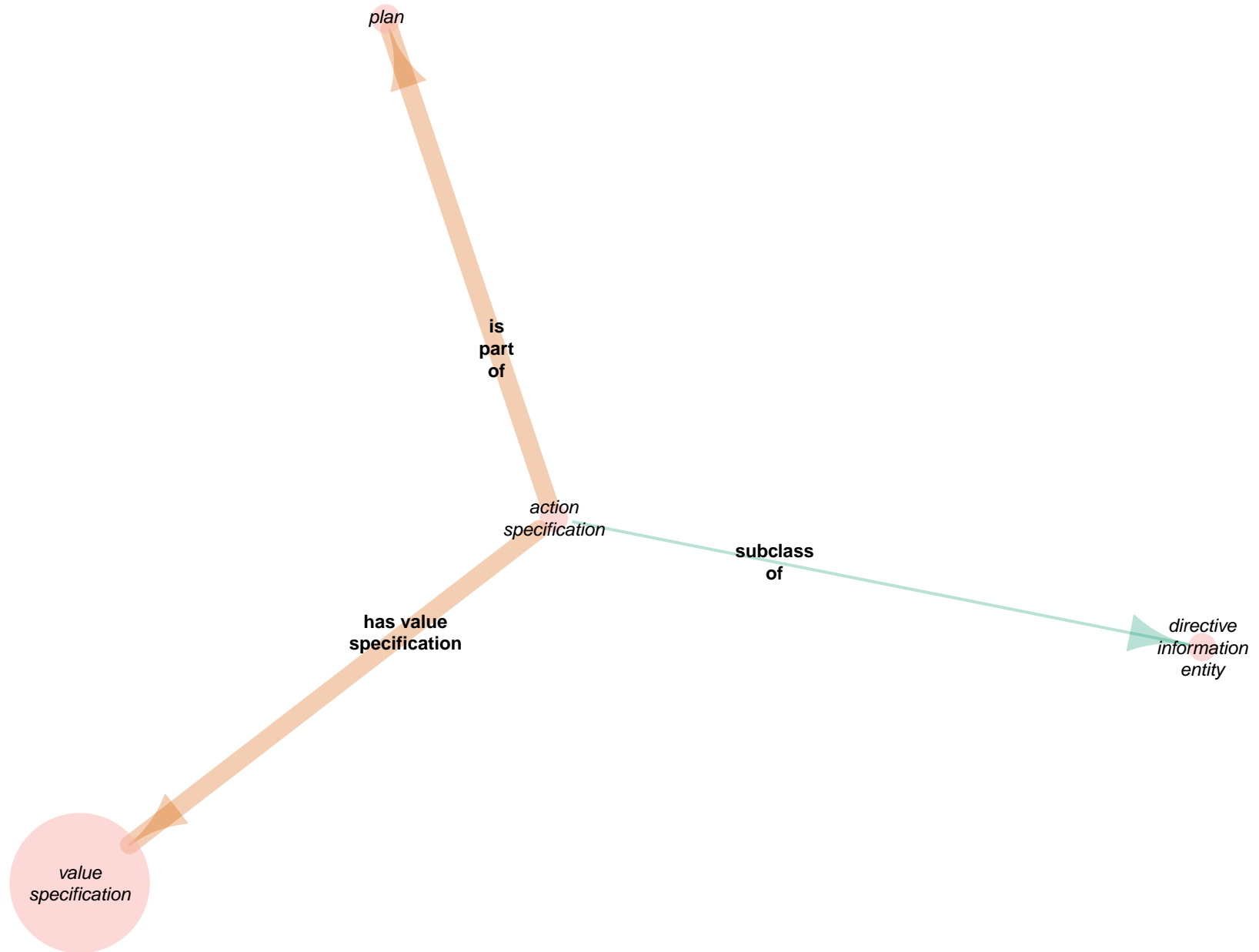
data set (http://purl.obolibrary.org/obo/IAO_0000100)
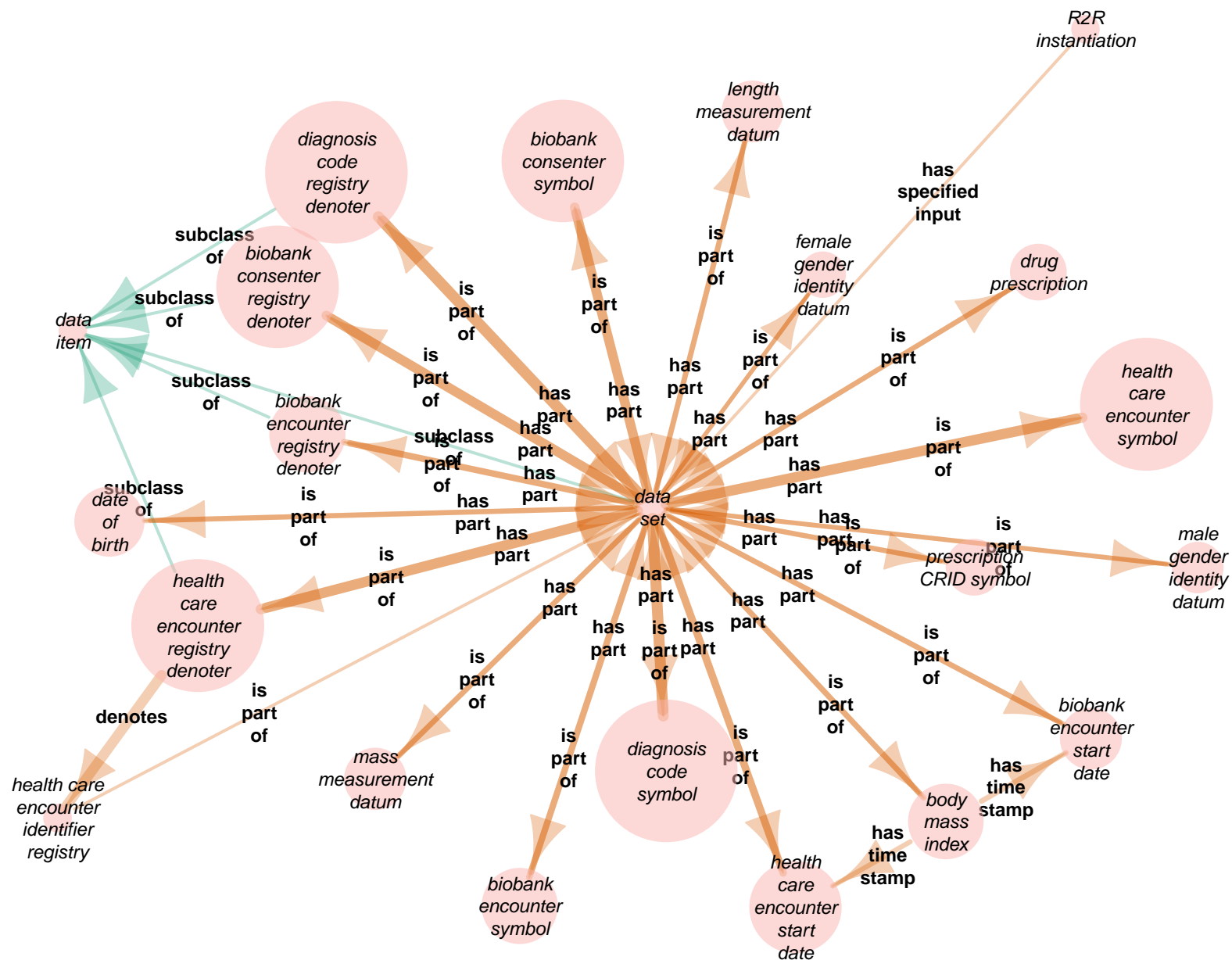
plan specification (http://purl.obolibrary.org/obo/IAO_0000104)

plan

concretizes

plan specification

has part

subclass of

directive information entity

see also

version info

comment

string

length measurement datum (http://purl.obolibrary.org/obo/IAO_0000408)

scalar value specification

data set

has part

is part of

has value specification

length measurement datum

subclass of

scalar measurement datum

is quality measurement of

height

is about

has specified output

has quality

biobank consenter

has specified input
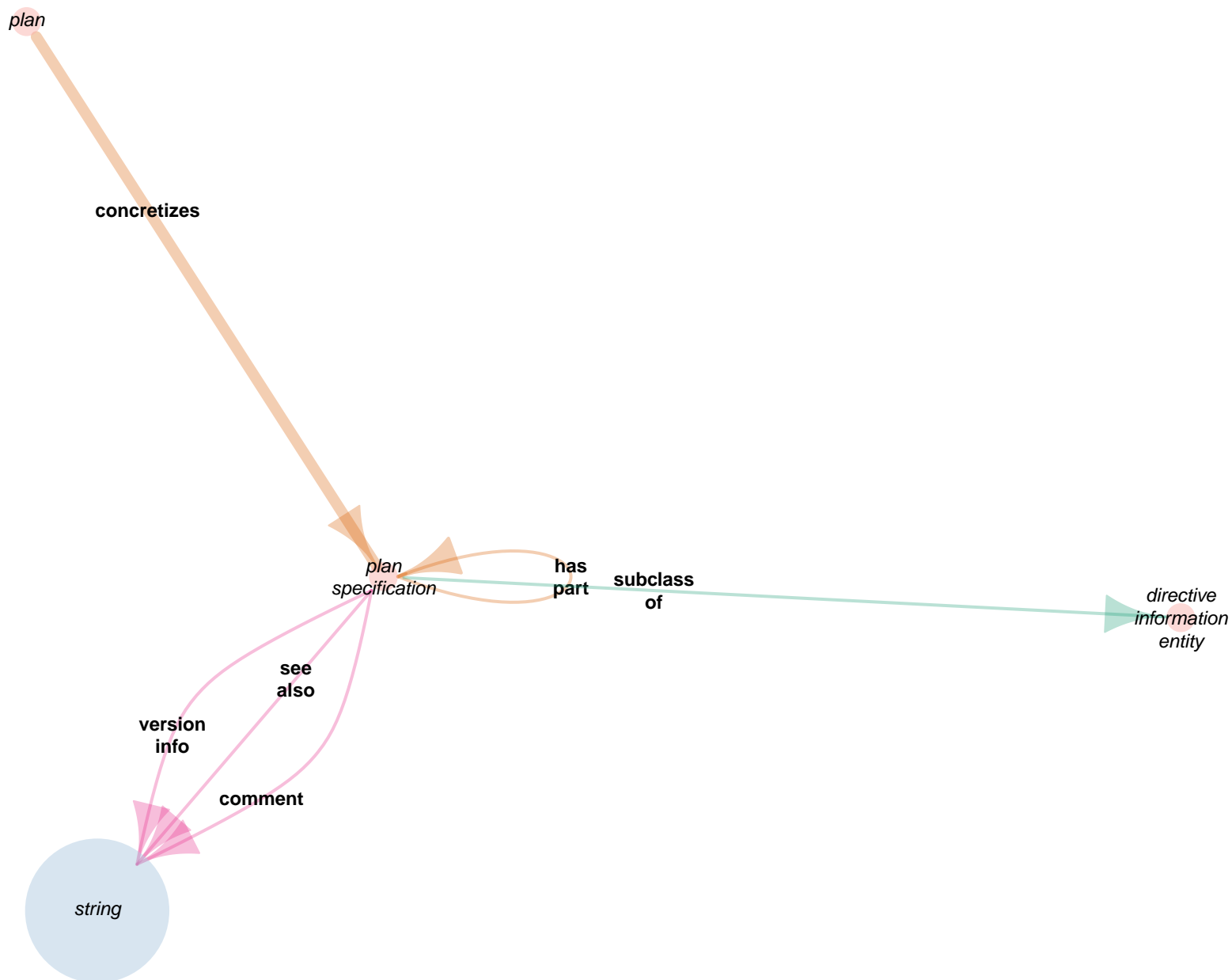
length measurement assay
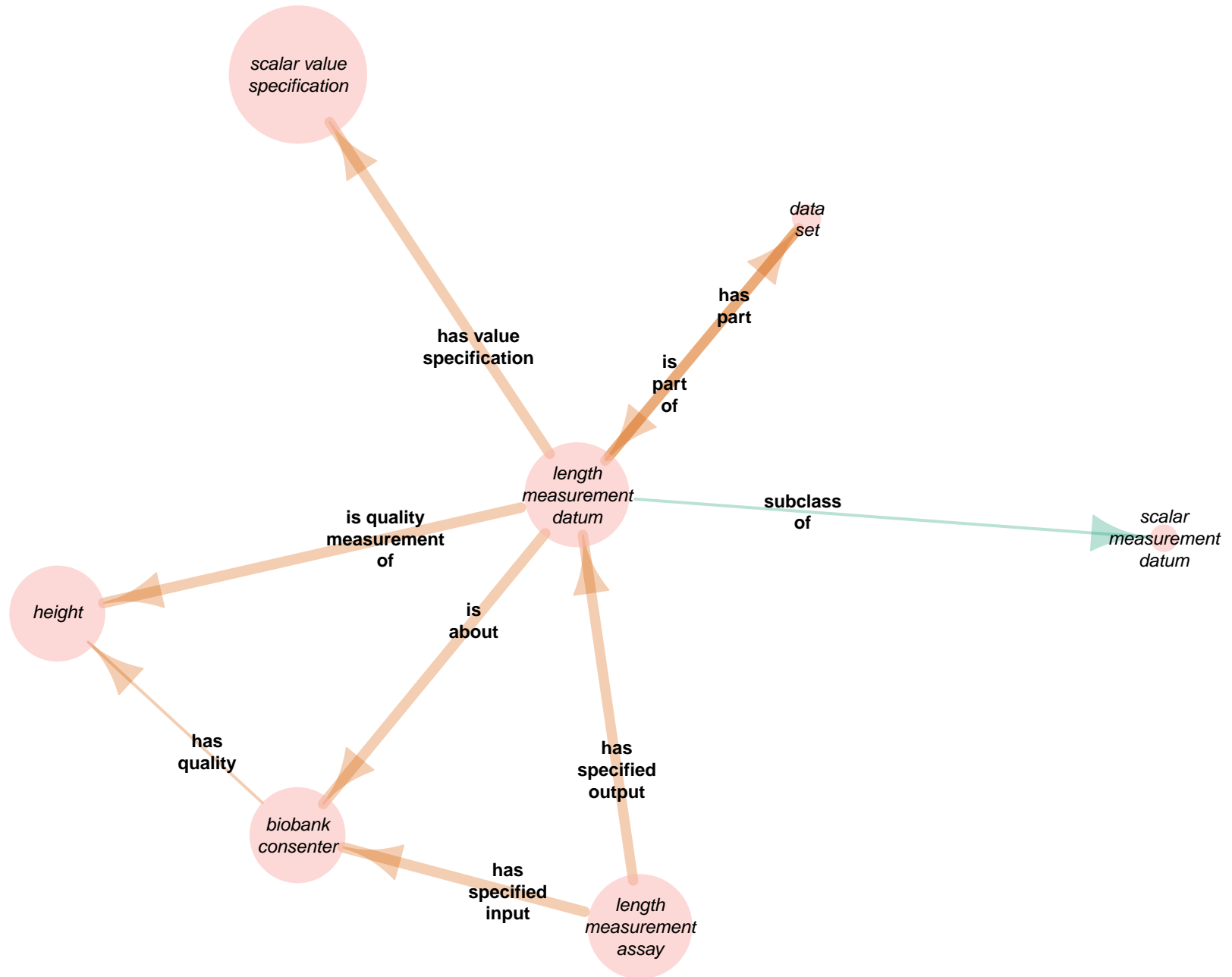
mass measurement datum (http://purl.obolibrary.org/obo/IAO_0000414)
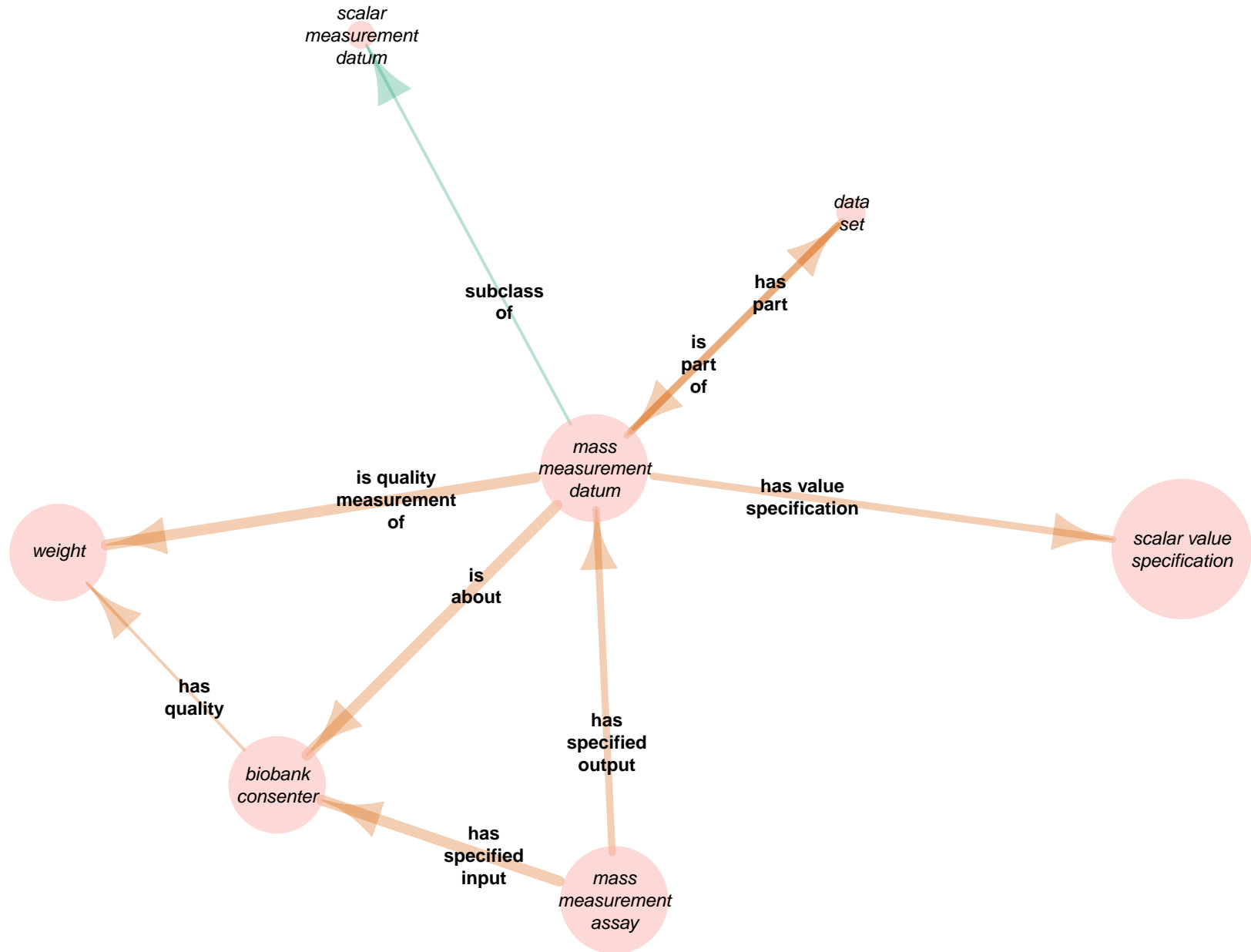
centrally registered identifier (http://purl.obolibrary.org/obo/IAO_0000578)
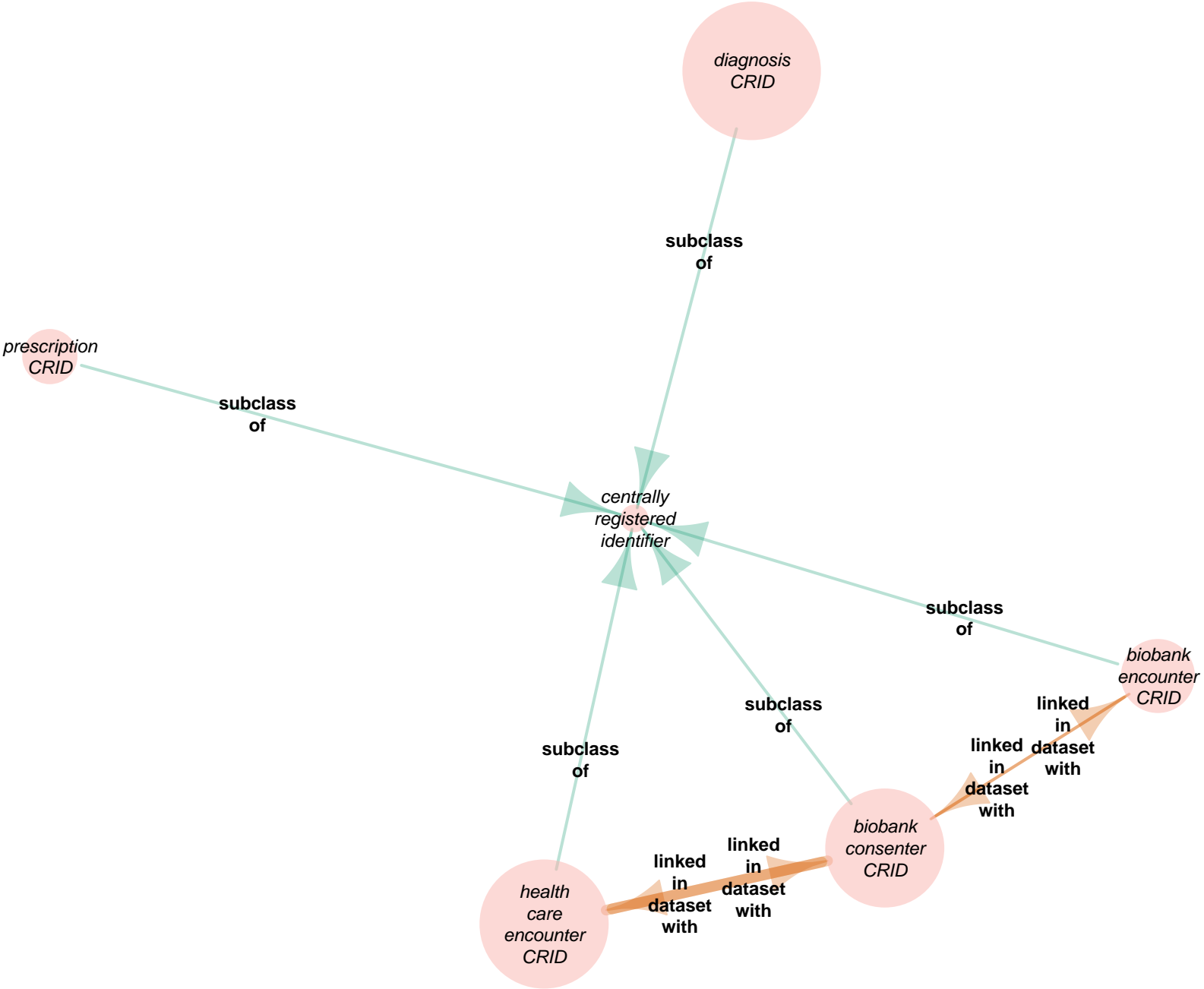
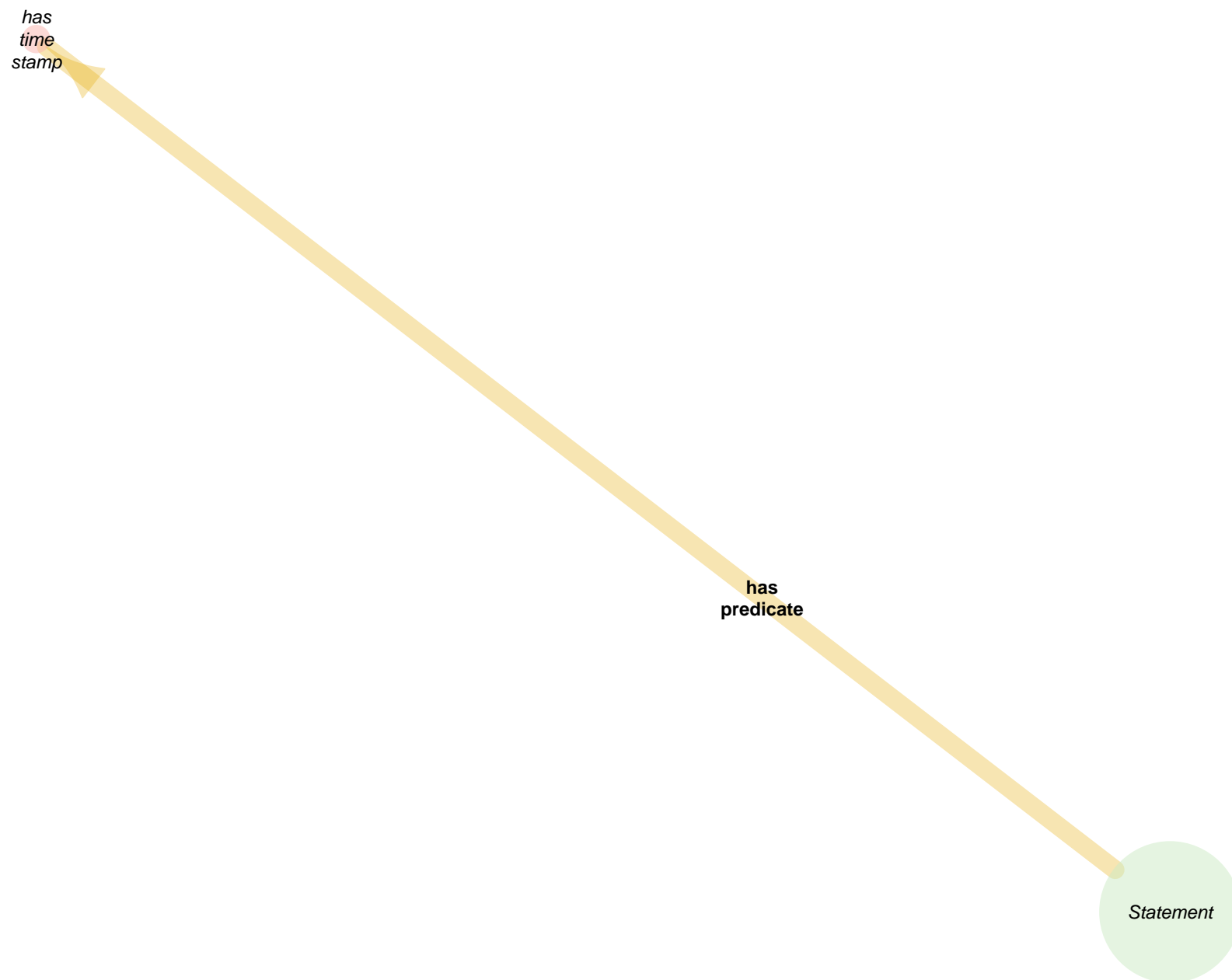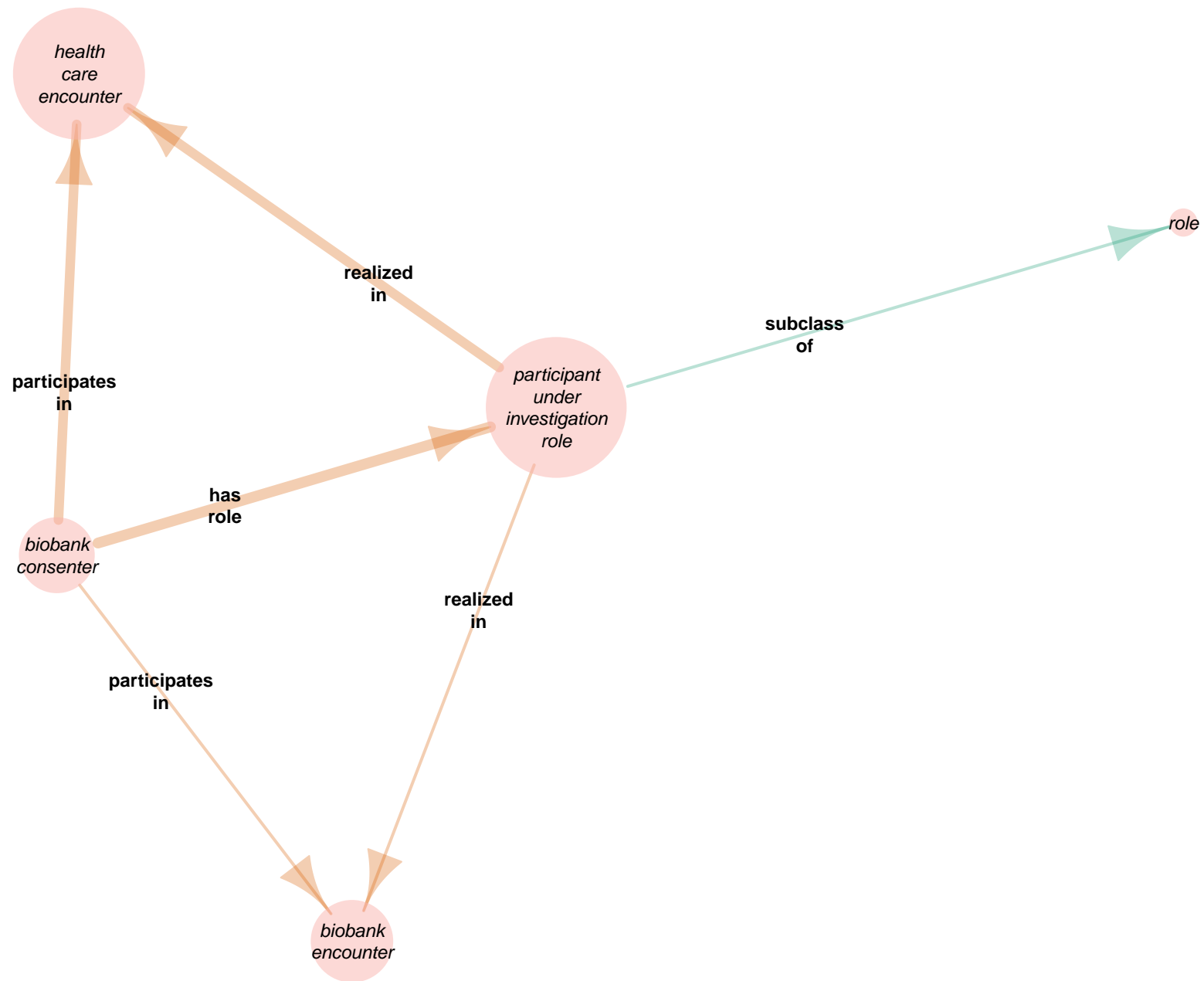# has time stamp (http://purl.obolibrary.org/obo/IAO_0000581)
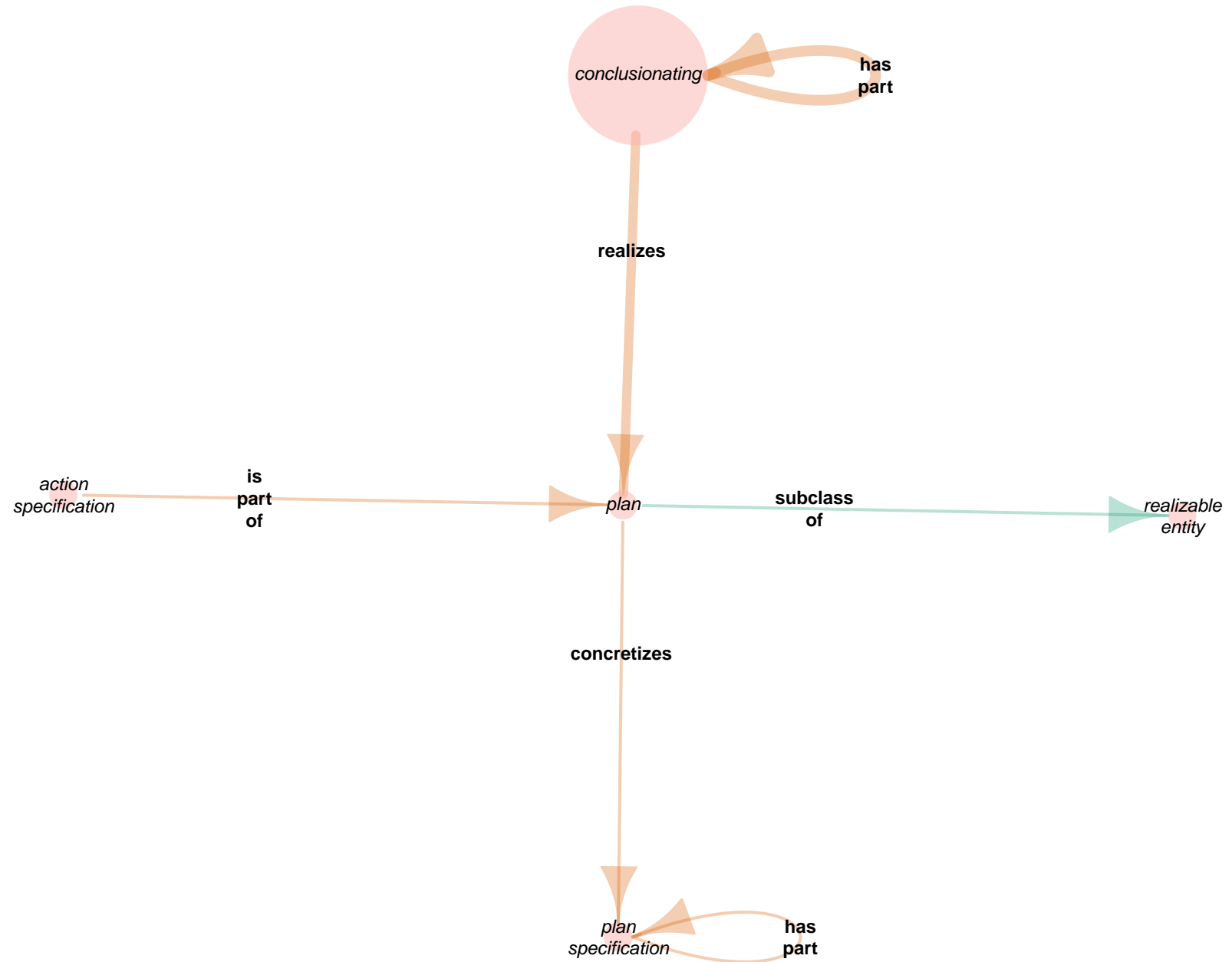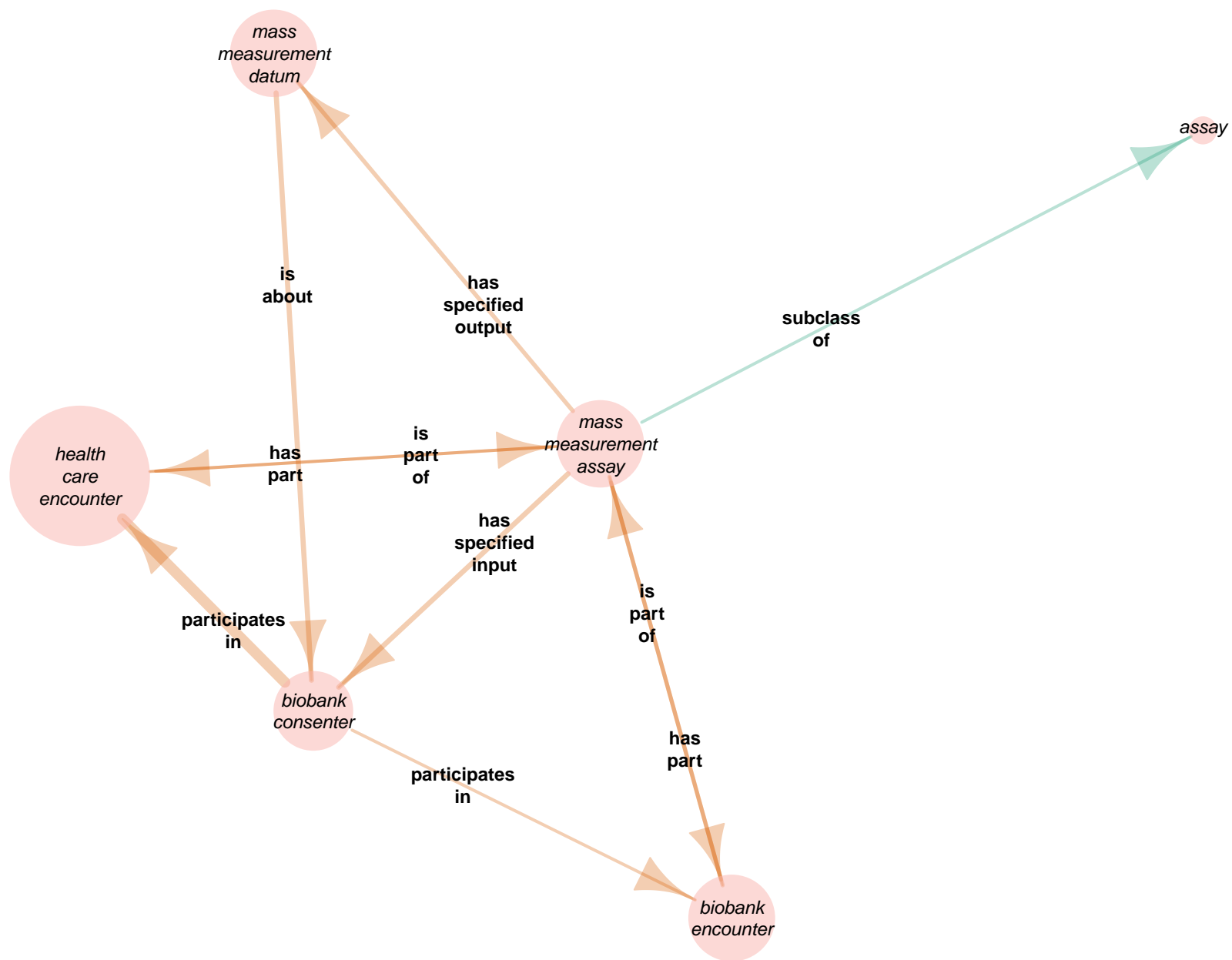
has time stamp

has predicate

Statement

participant under investigation role (http://purl.obolibrary.org/obo/OBI_0000097)
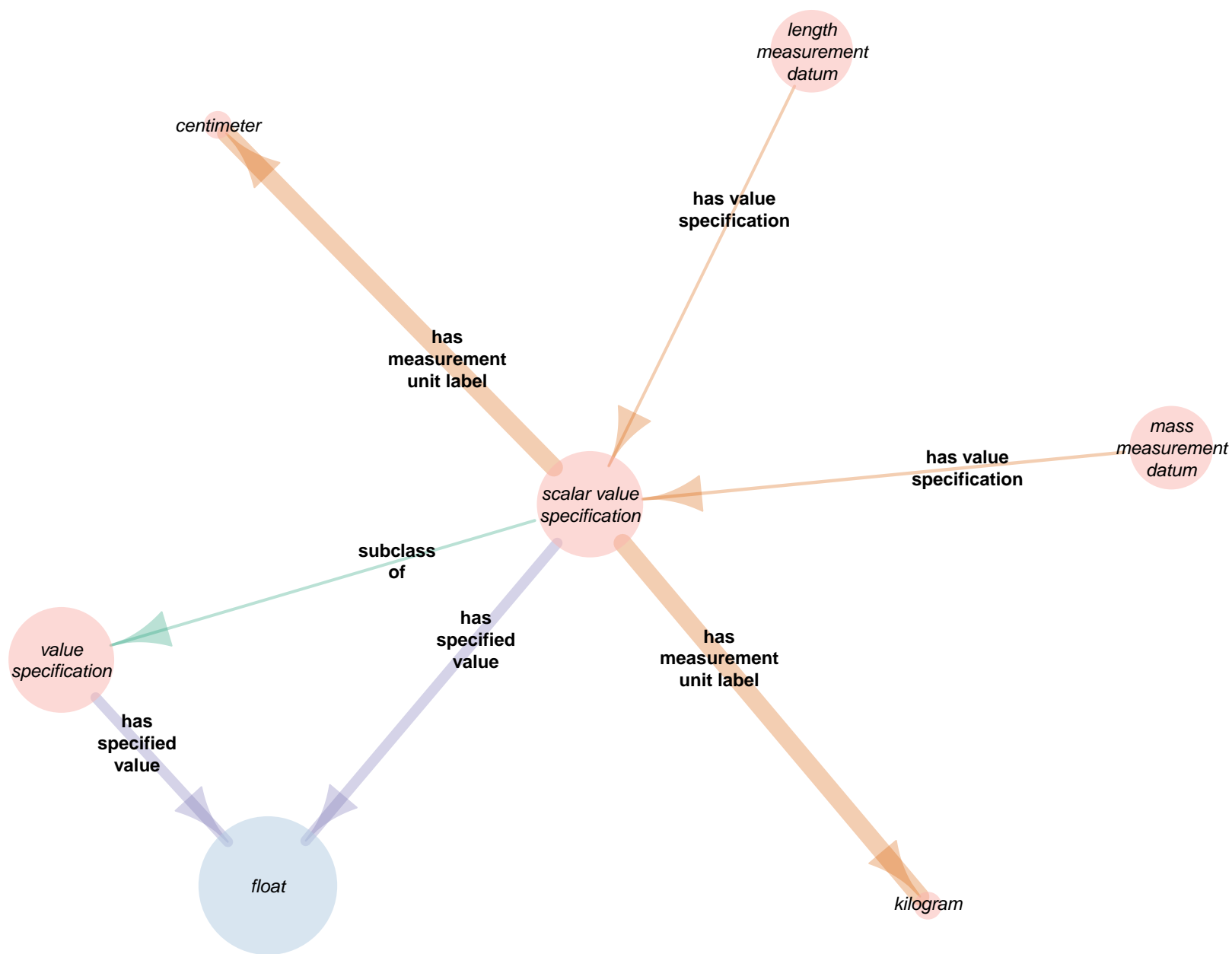
plan (http://purl.obolibrary.org/obo/OBI_0000260)

conclusionating

has part

realizes

action specification

is part of

plan

subclass of

realizable entity

concretizes

plan specification

has part

mass measurement assay (http://purl.obolibrary.org/obo/OBI_0000445)

scalar value specification (http://purl.obolibrary.org/obo/OBI_0001931)

has specified value (http://purl.obolibrary.org/obo/OBI_0002135)

has specified value

has predicate

Statement
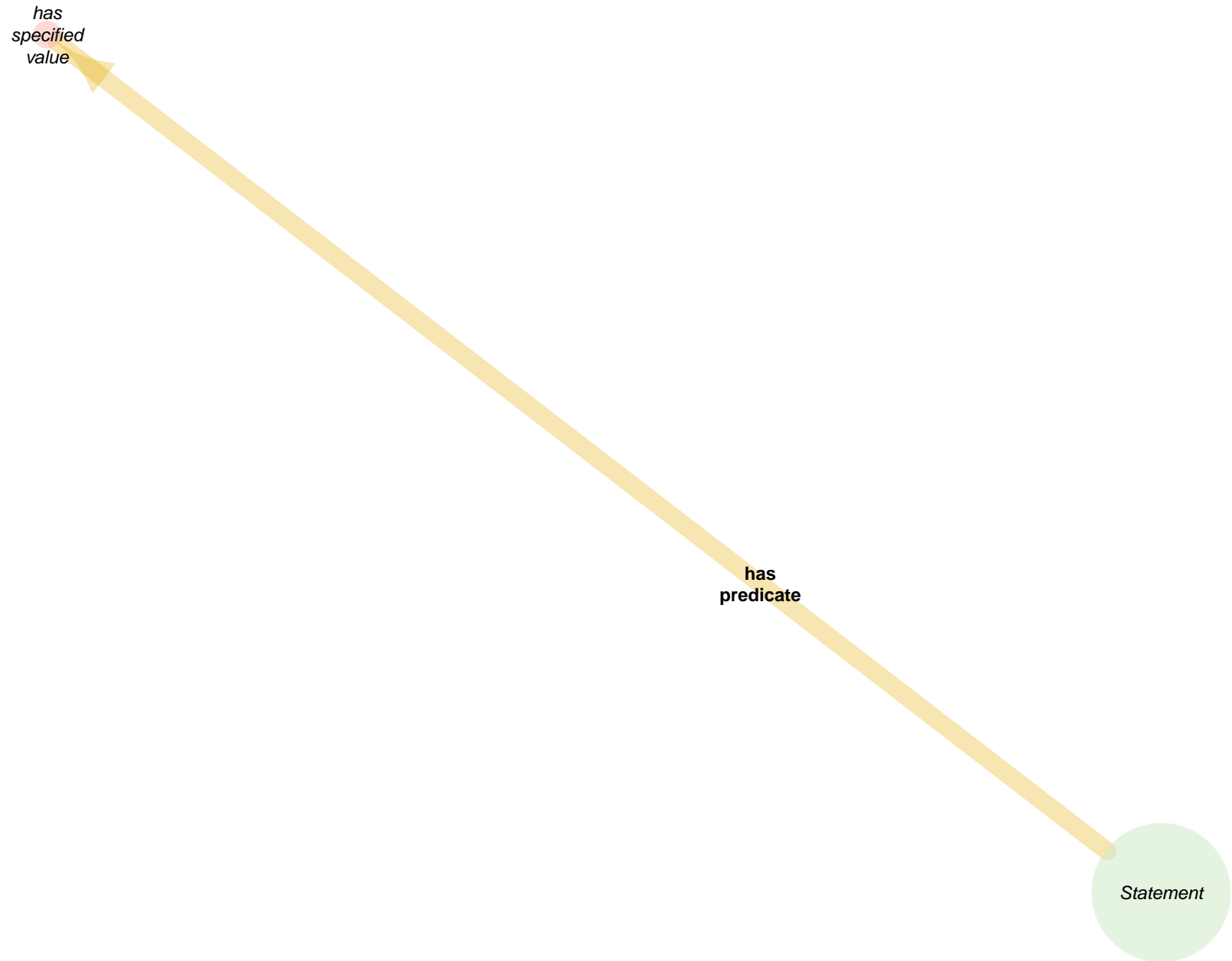
diagnosis (http://purl.obolibrary.org/obo/OGMS_0000073)
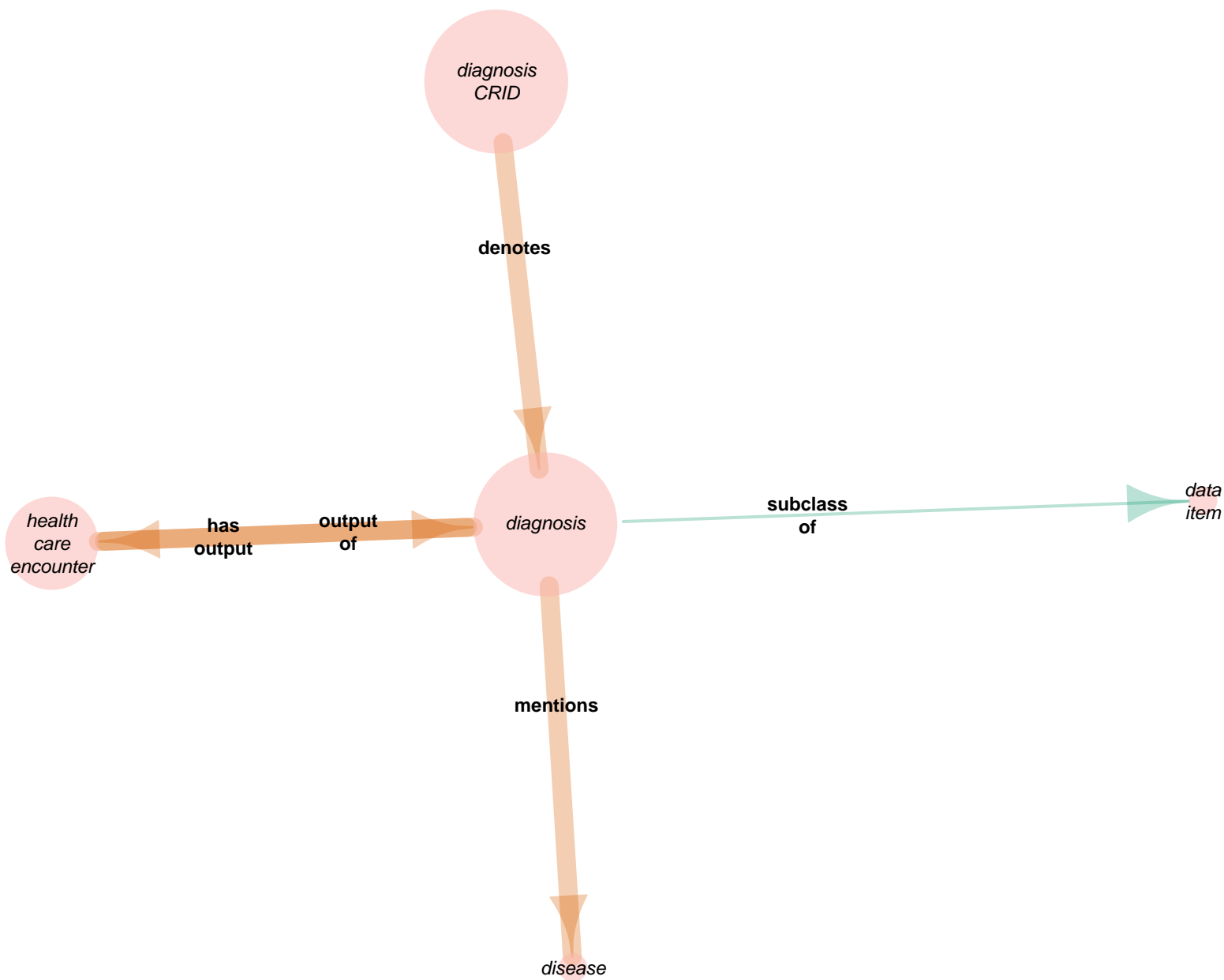
health care encounter (http://purl.obolibrary.org/obo/OGMS_0000097)
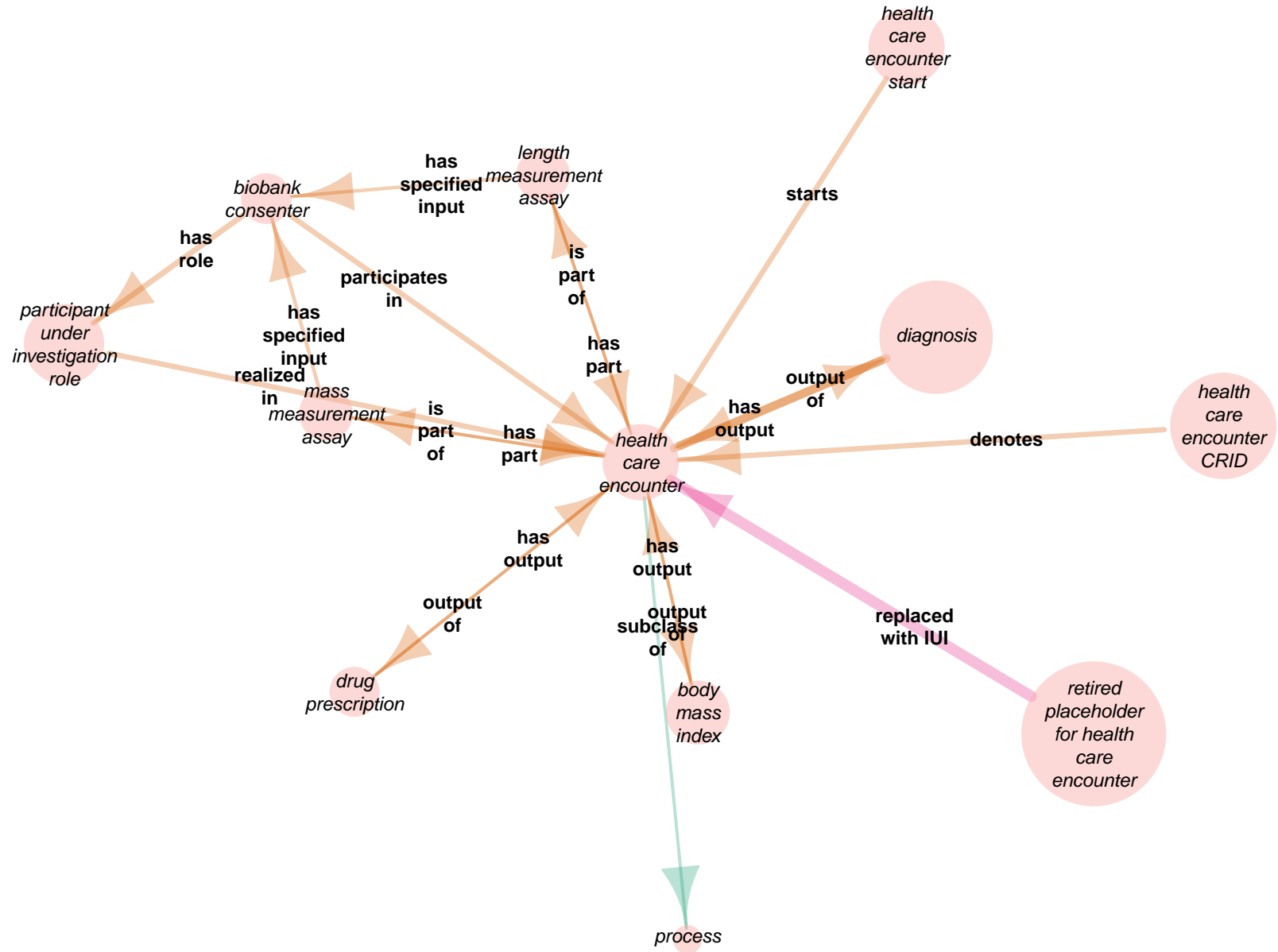
female gender identity datum (http://purl.obolibrary.org/obo/OMRSE_00000138)
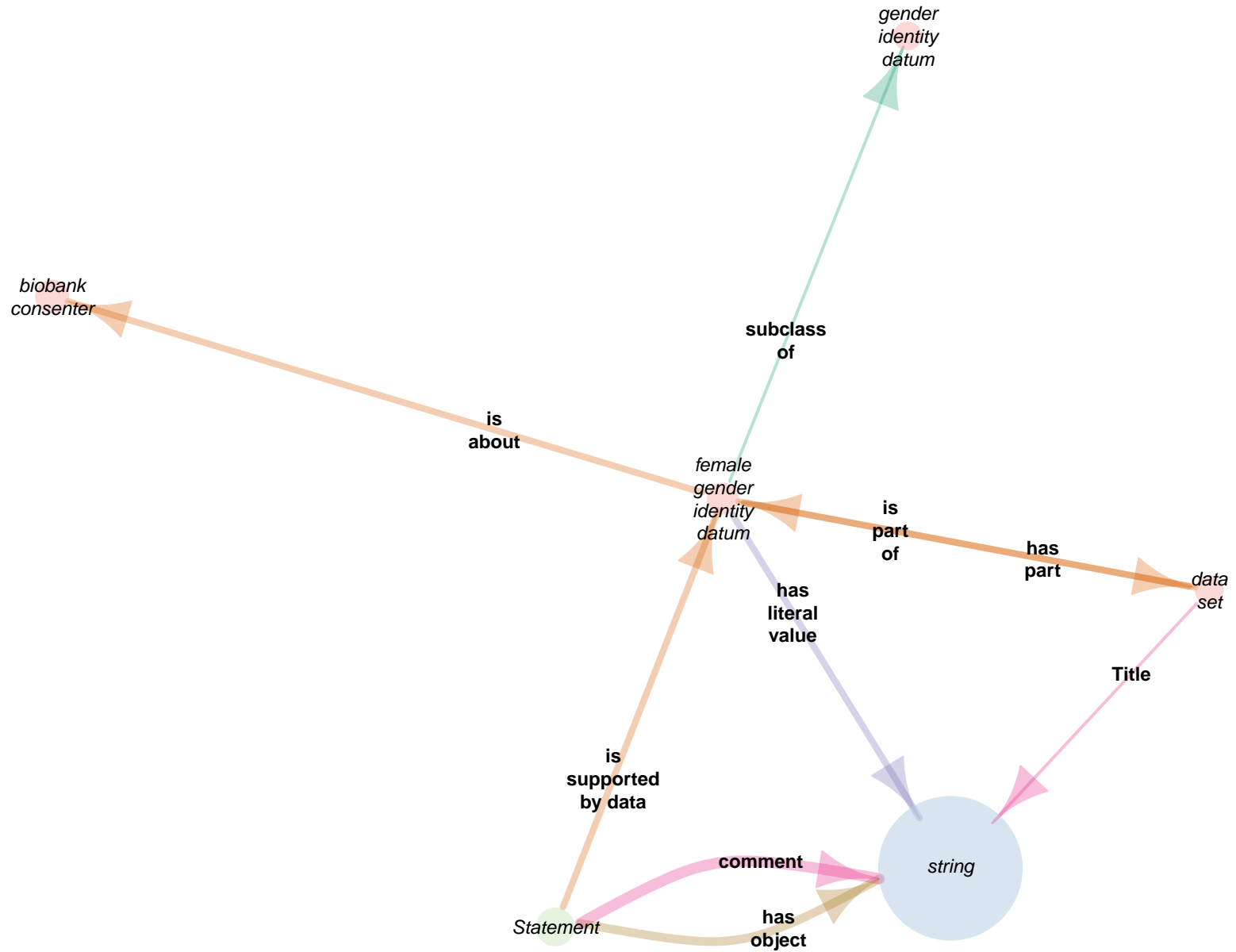
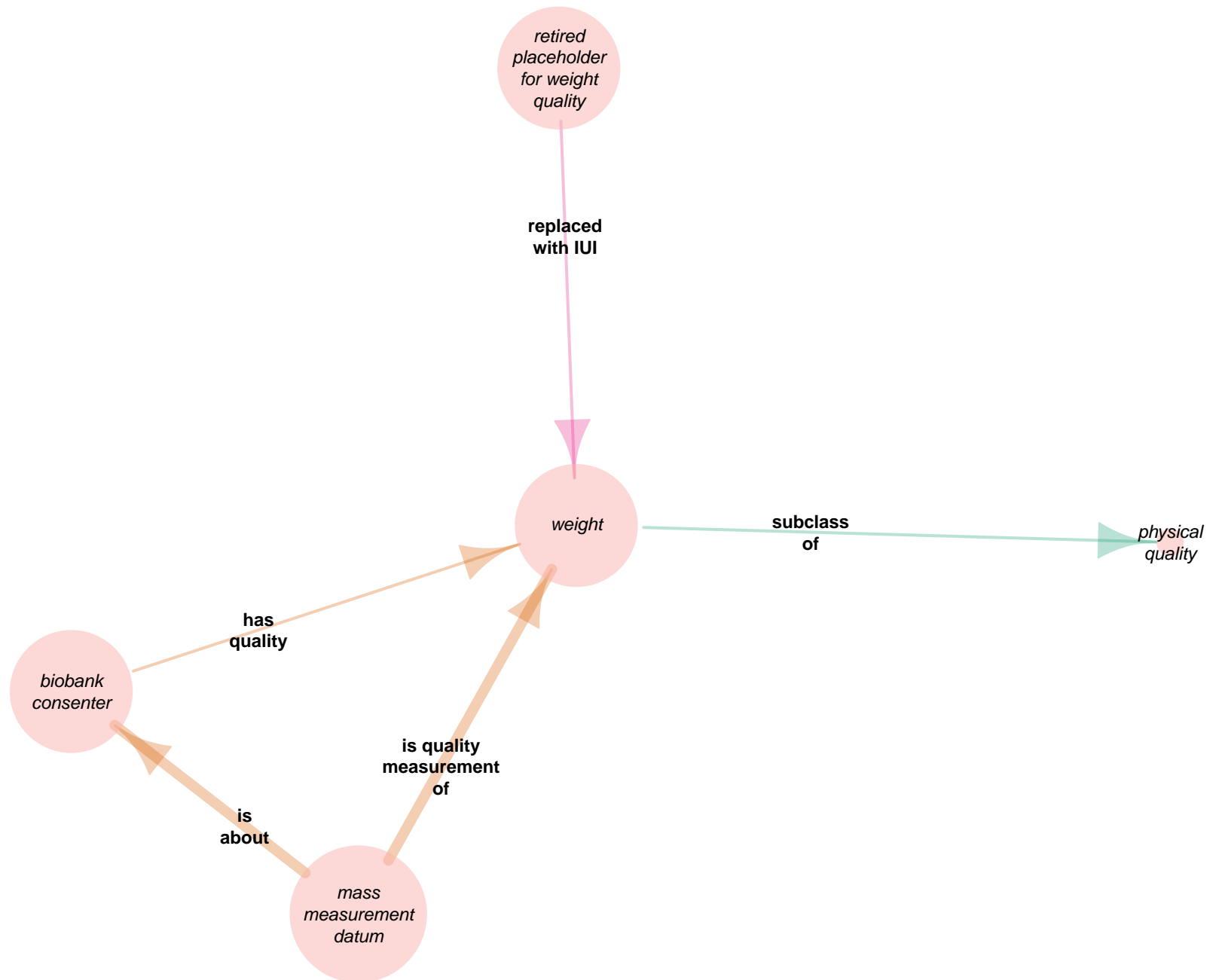# male gender identity datum (http://purl.obolibrary.org/obo/OMRSE_00000141)
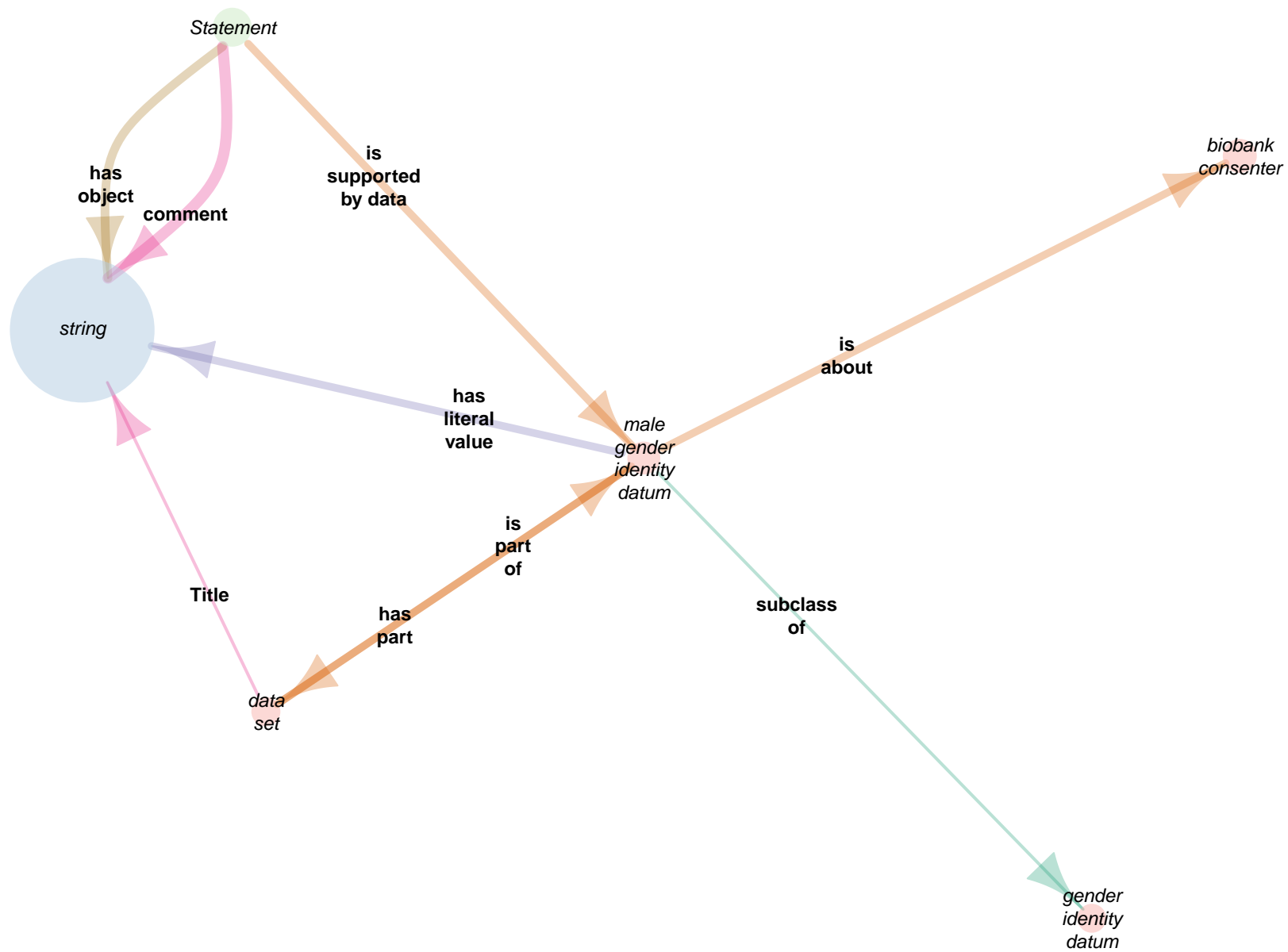
biological sex (http://purl.obolibrary.org/obo/PATO_0000047)
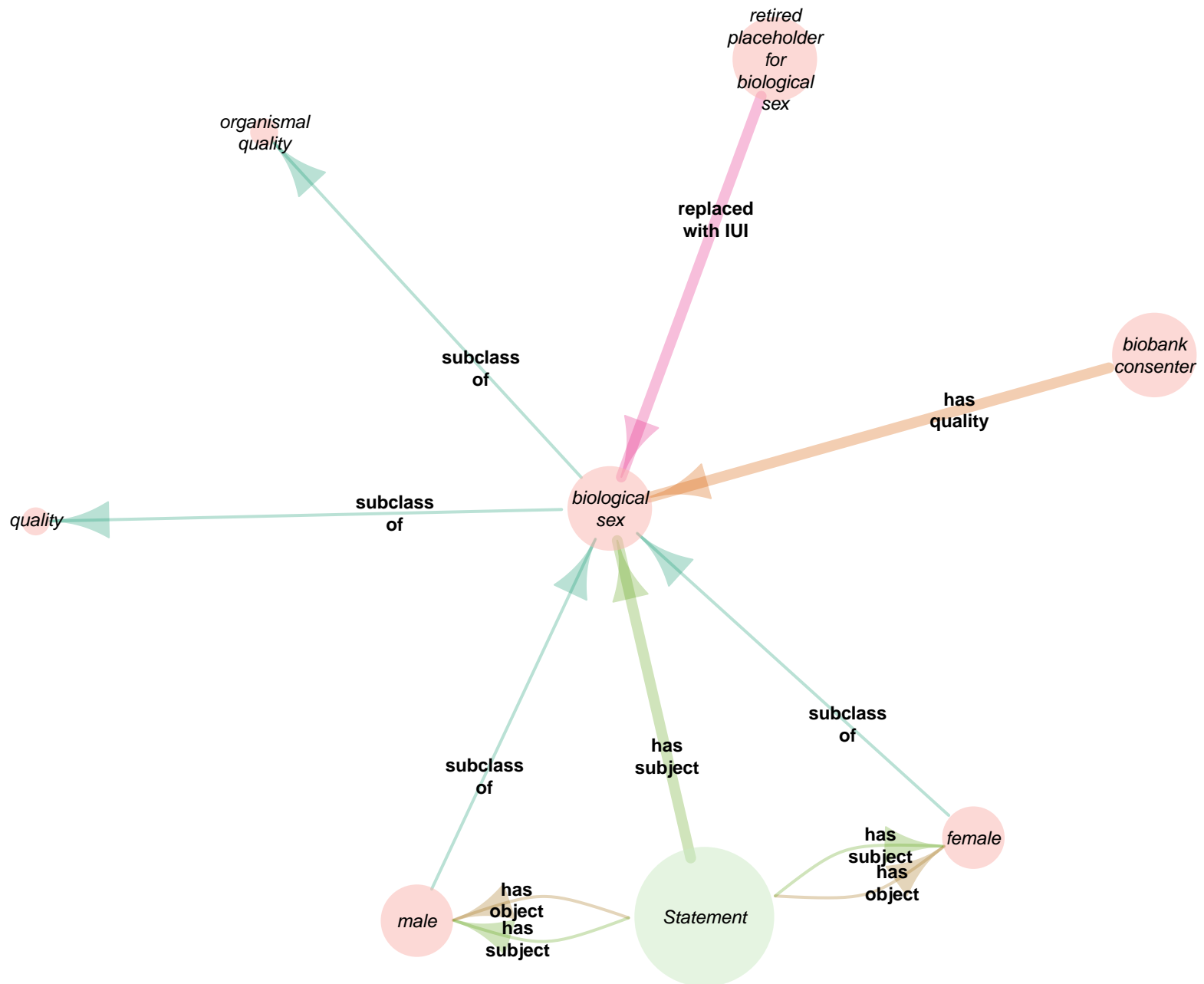
height (http://purl.obolibrary.org/obo/PATO_0000119)
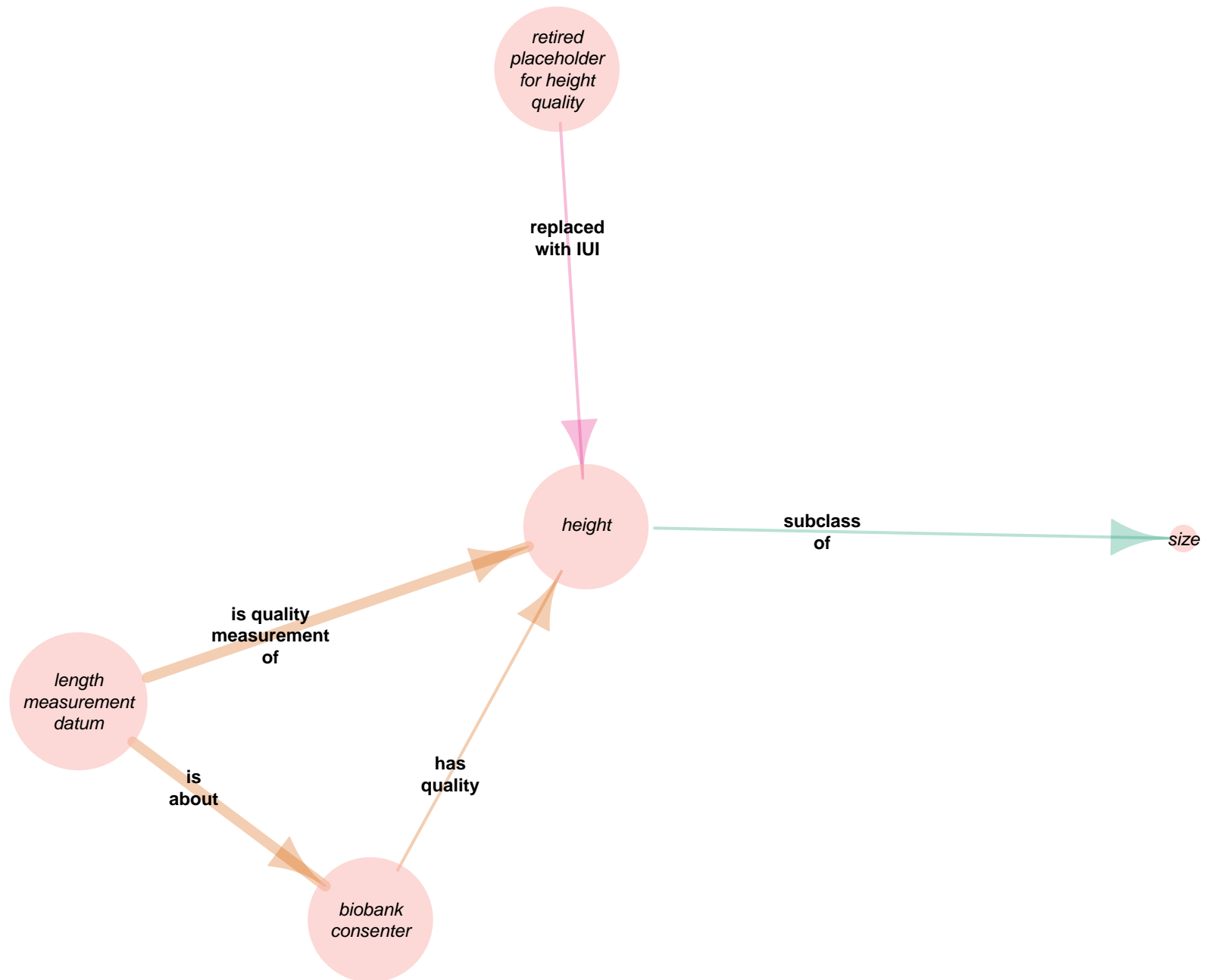
weight (http://purl.obolibrary.org/obo/PATO_0000128)

drug prescription (http://purl.obolibrary.org/obo/PDRO_0000024)

- health care prescription
- drug product
- **mentions**
- health care encounter
- **has output**
- **output of**
- **subclass of**
- drug prescription
- **is part of**
- **has part**
- data set
- **has textual value**
- **Title**
- **denotes**
- string
- prescription CRID
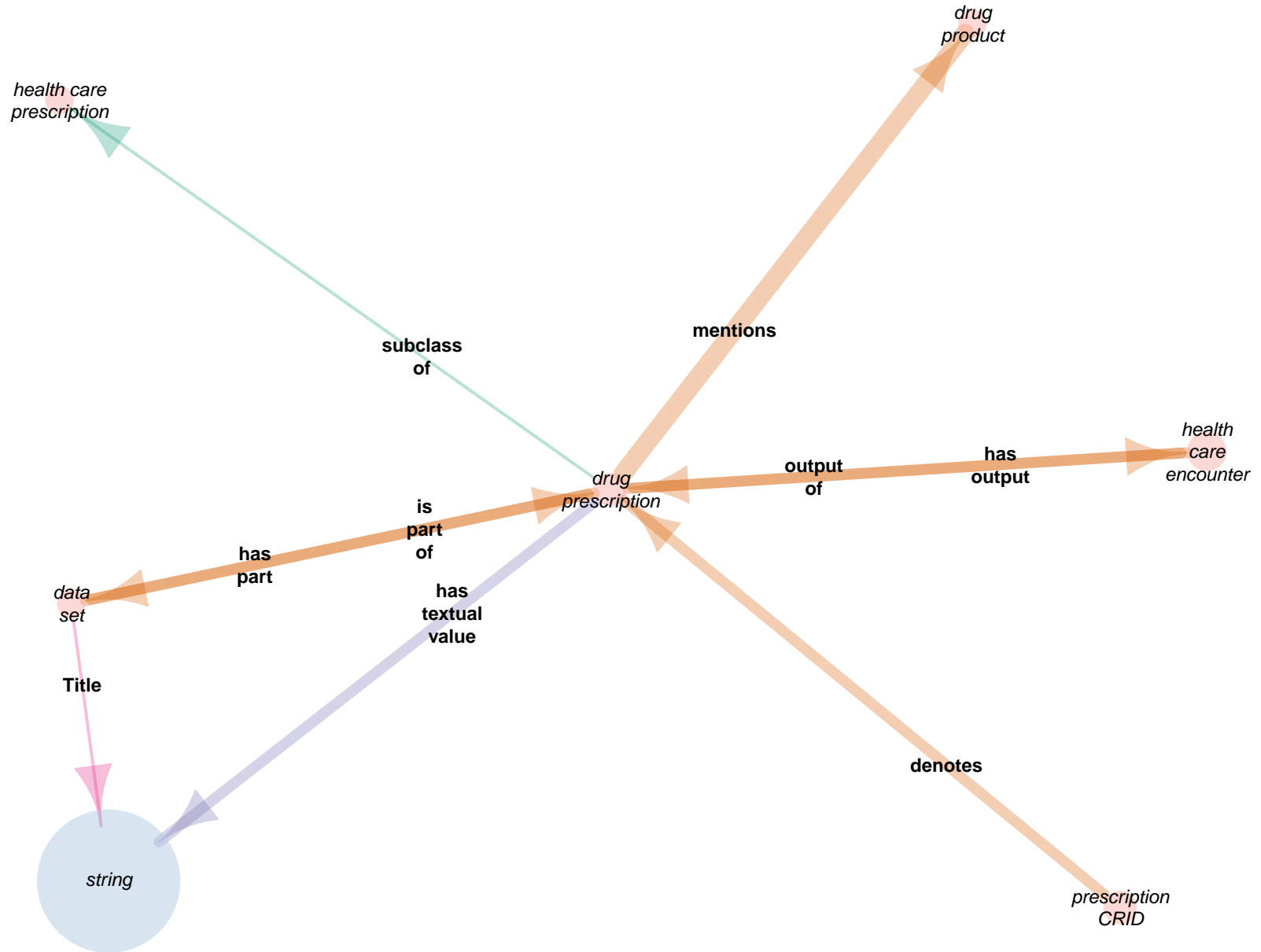
adipose tissue (http://purl.obolibrary.org/obo/UBERON_0001013)
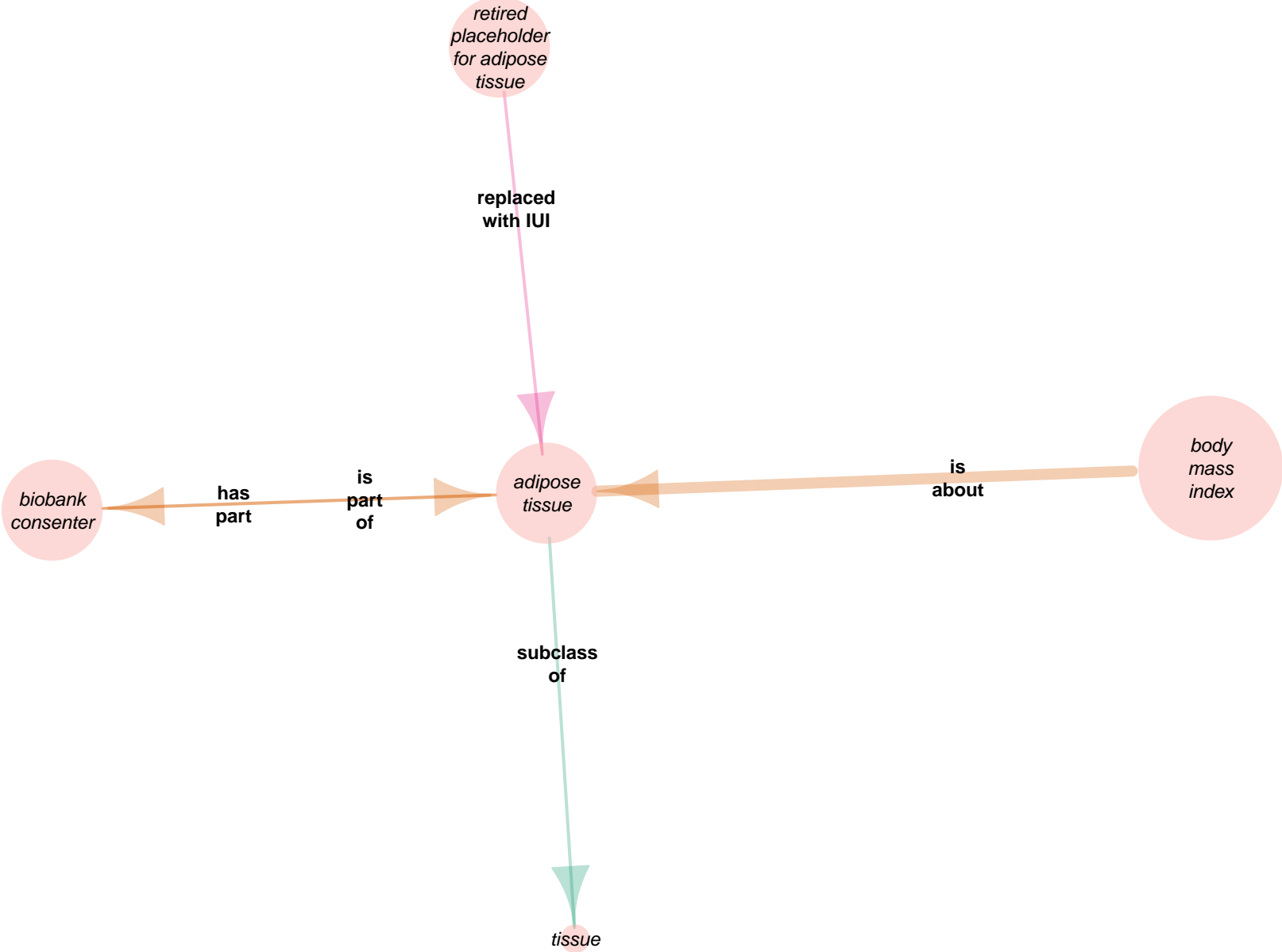
start of neonate stage (http://purl.obolibrary.org/obo/UBERON_0035946)

life cycle temporal boundary

subclass of

date of birth — **is about** → *start of neonate stage* ← **has birth** — *biobank consenter*

replaced with IUI

retired placeholder for process boundary
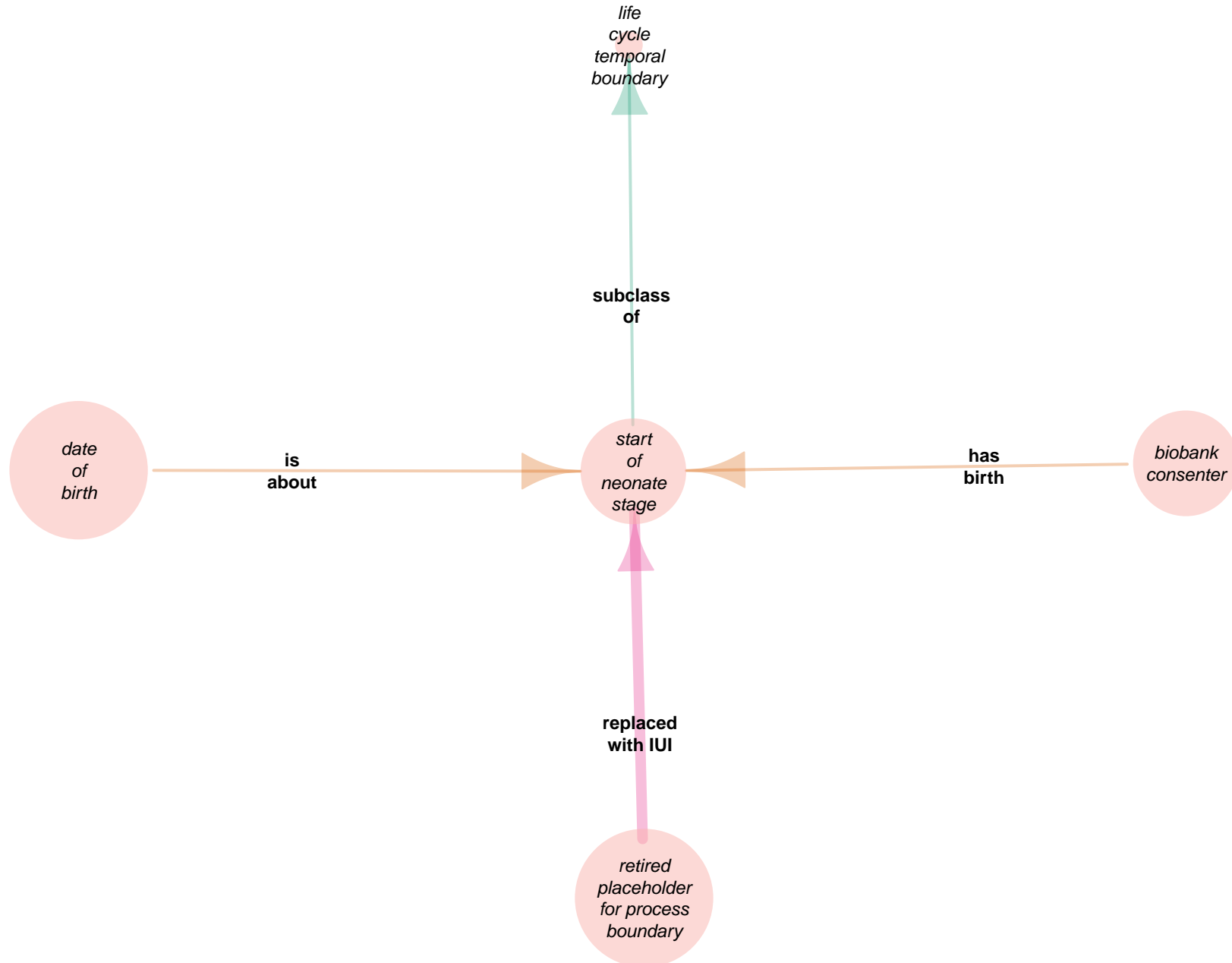
kilogram (http://purl.obolibrary.org/obo/UO_0000009)

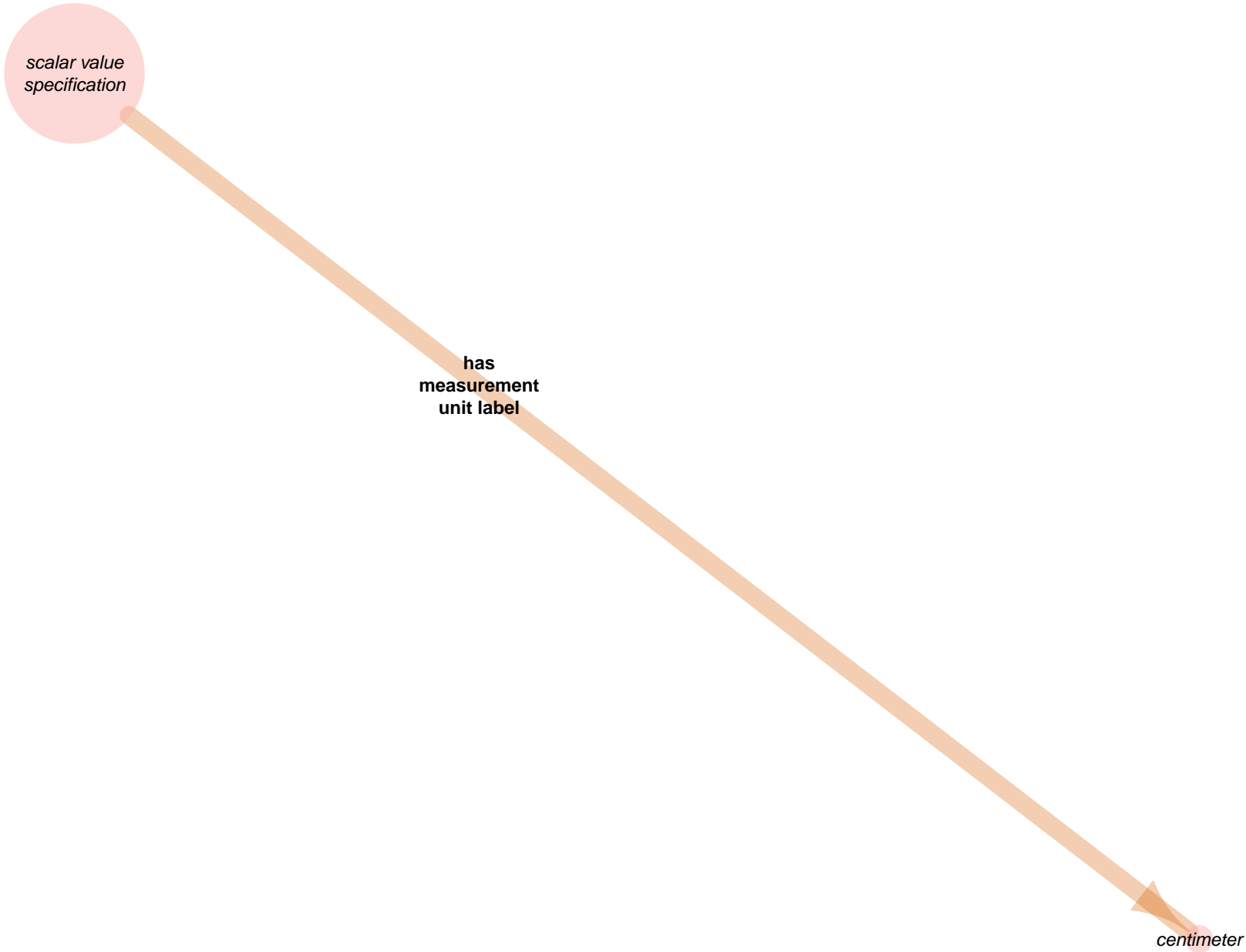*scalar value specification*

has measurement unit label
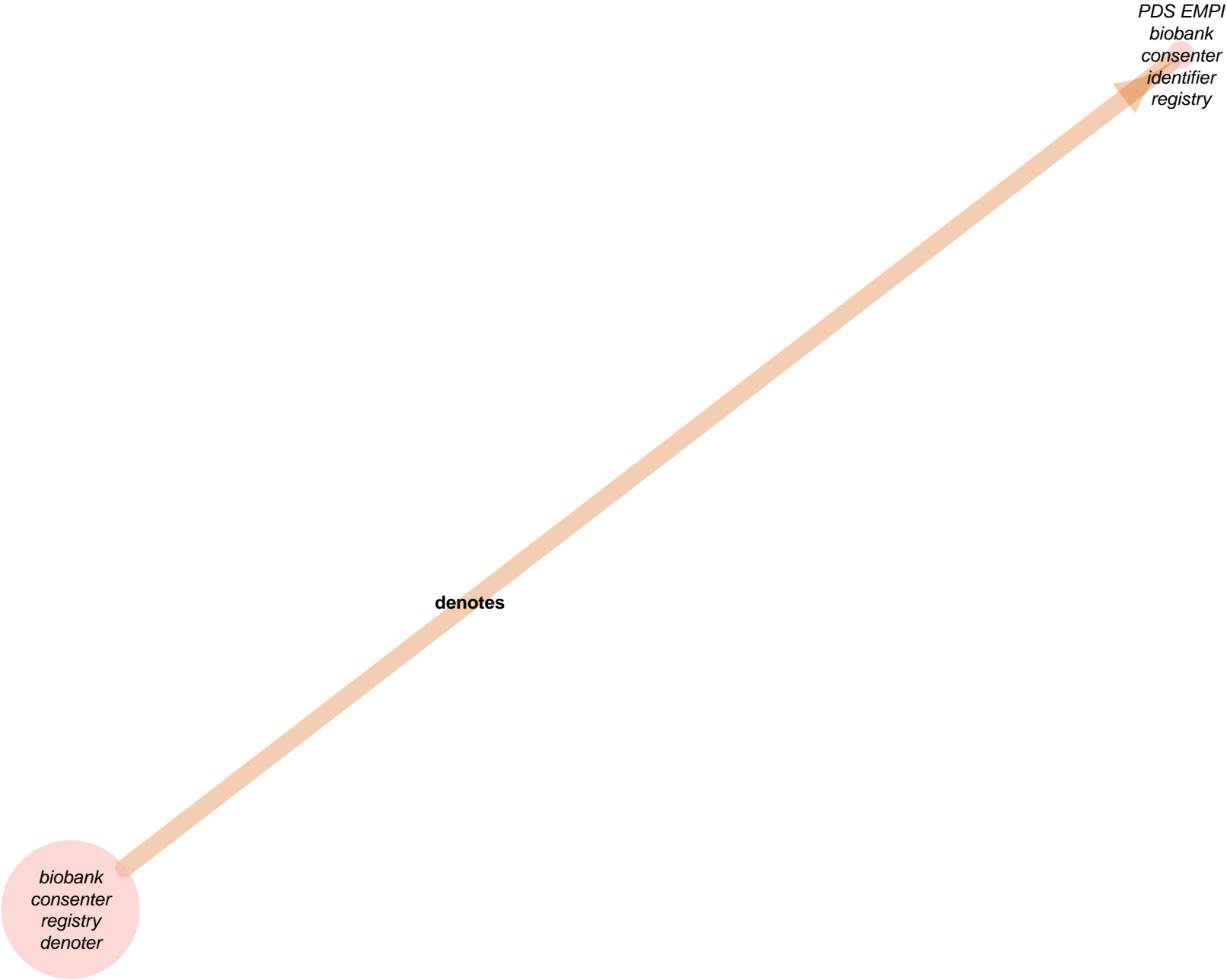
kilogram
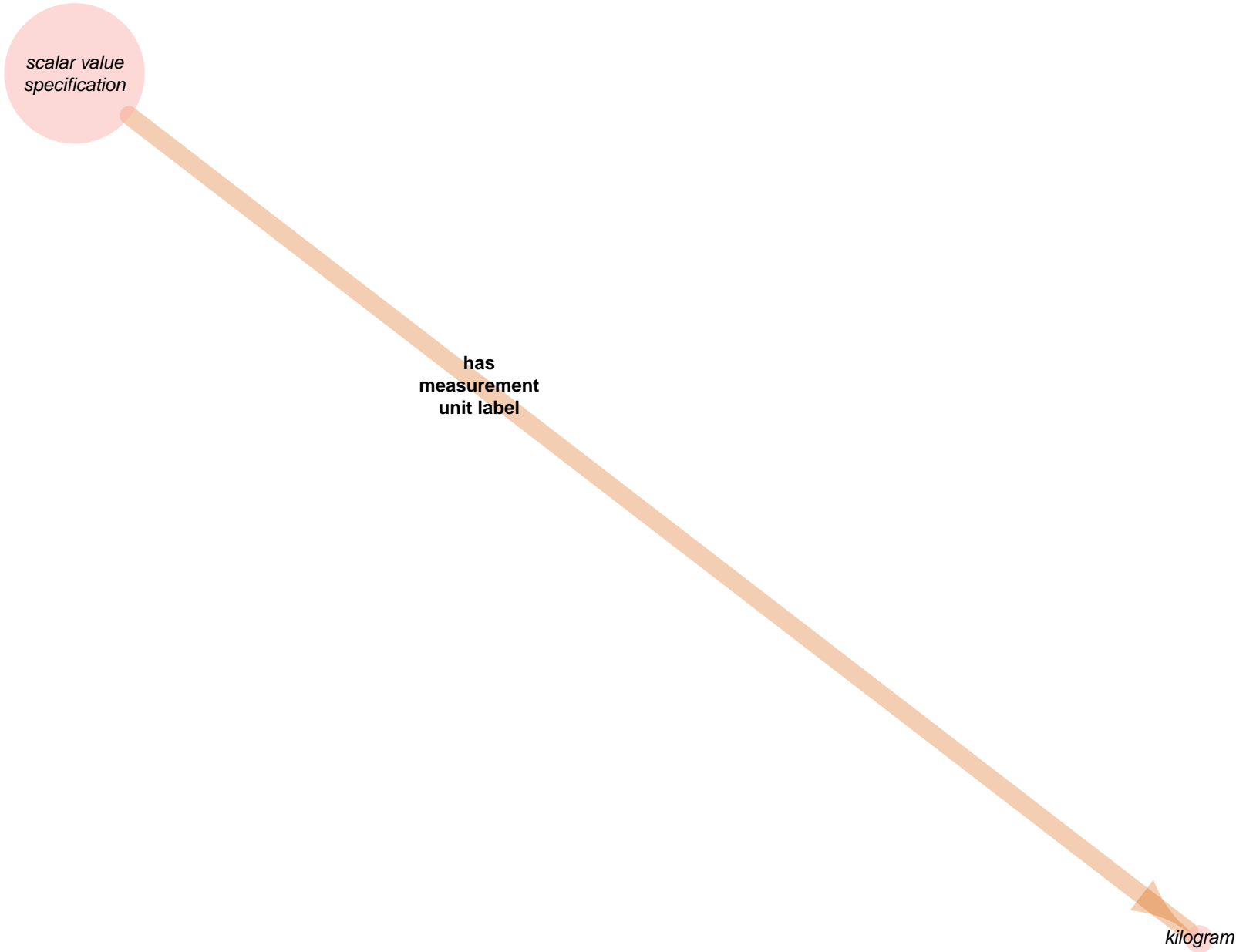
centimeter (http://purl.obolibrary.org/obo/UO_0000015)

scalar value specification

has measurement unit label

centimeter

PDS EMPI
biobank
consenter
identifier
registry

denotes

biobank
consenter
registry
denoter

*PMBB
ENCOUNTER
PACK ID
biobank
encounter
identifier
registry*

denotes

*biobank
encounter
registry
denoter*

PDS PK_Encounter_ID health care encounter identifier registry (http://transformunify.org/ontologies/TURBO_0000440)

health care encounter registry denoter

denotes

PDS PK Encounter ID health care encounter identifier registry
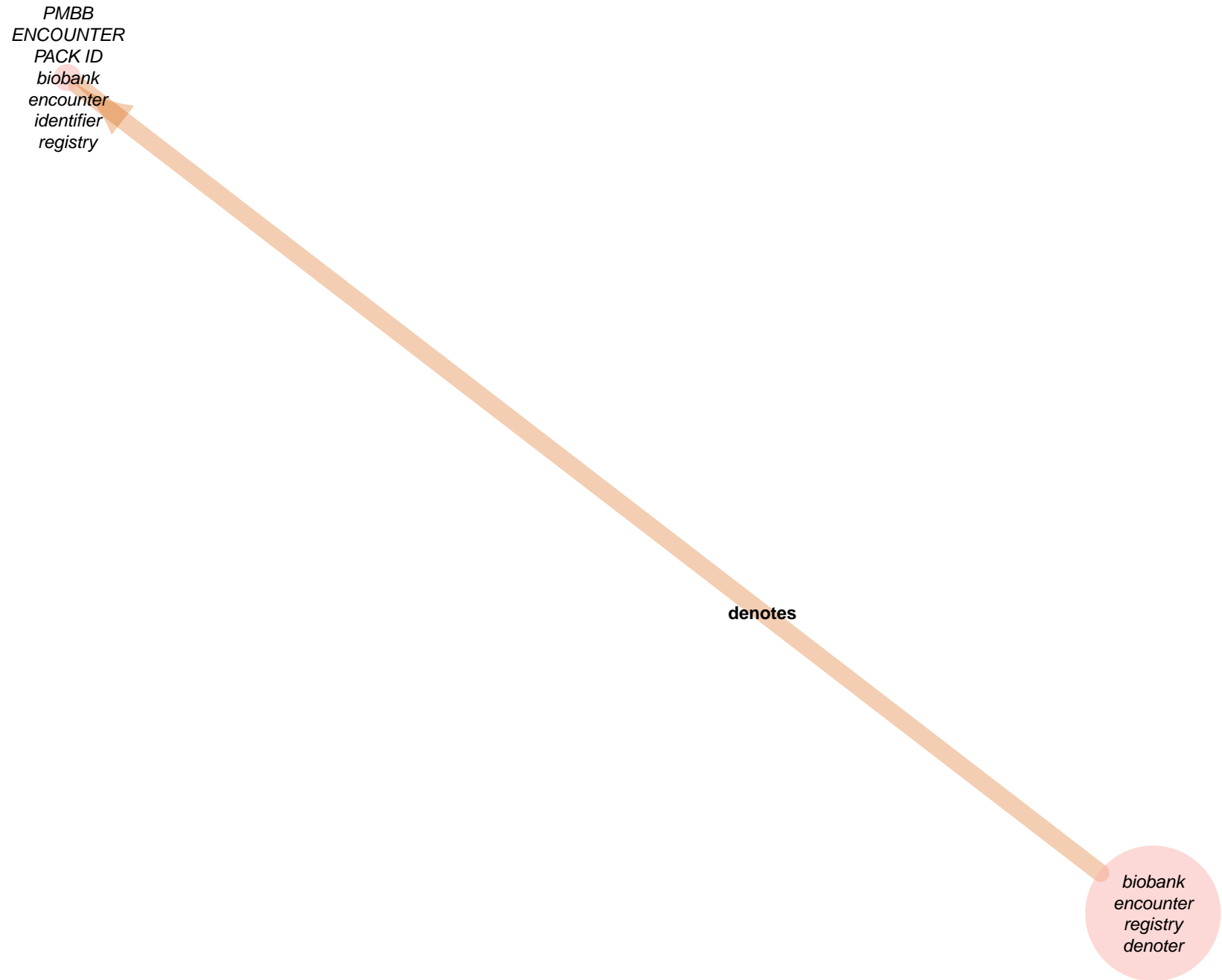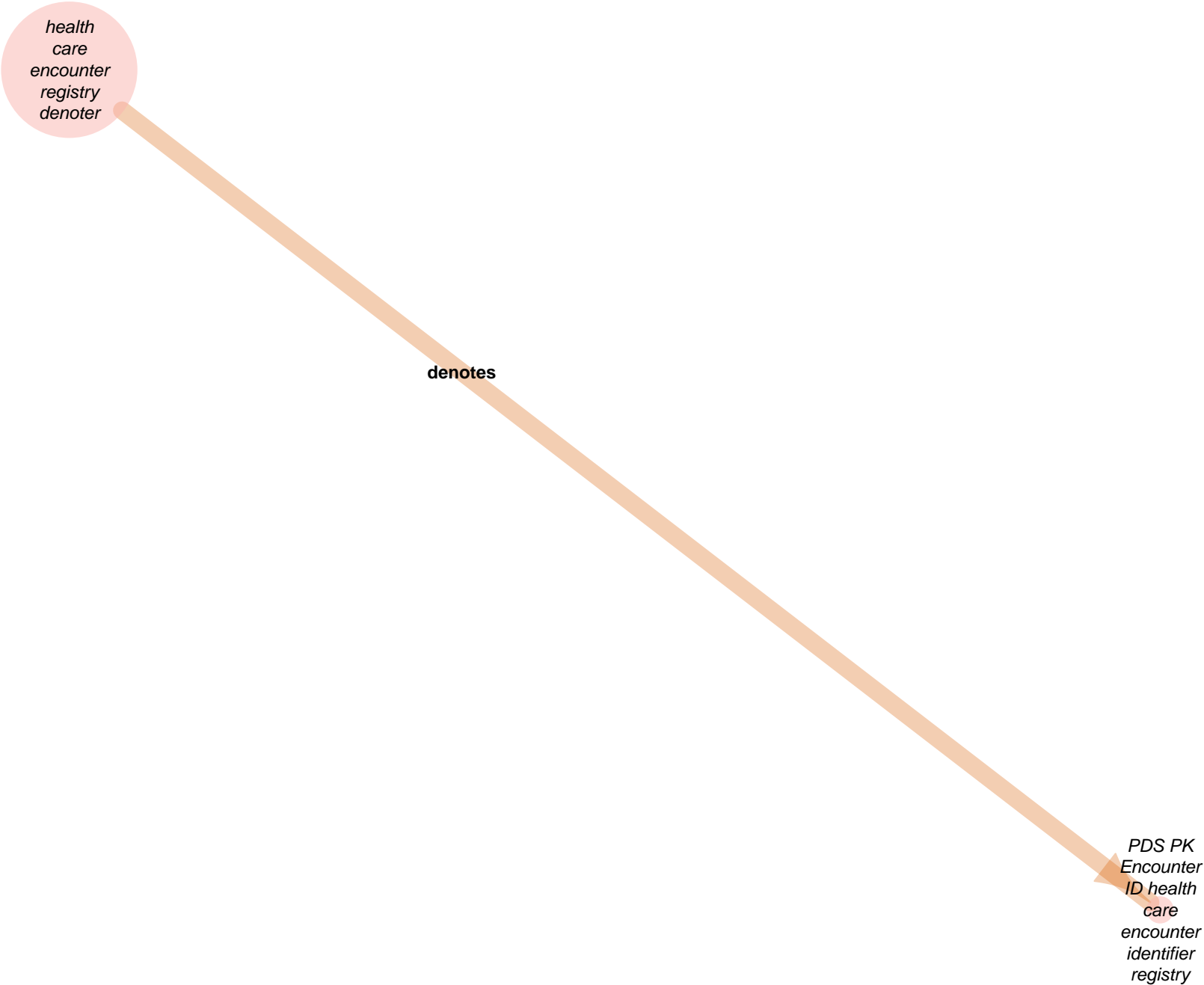
biobank consenter (http://transformunify.org/ontologies/TURBO_0000502)
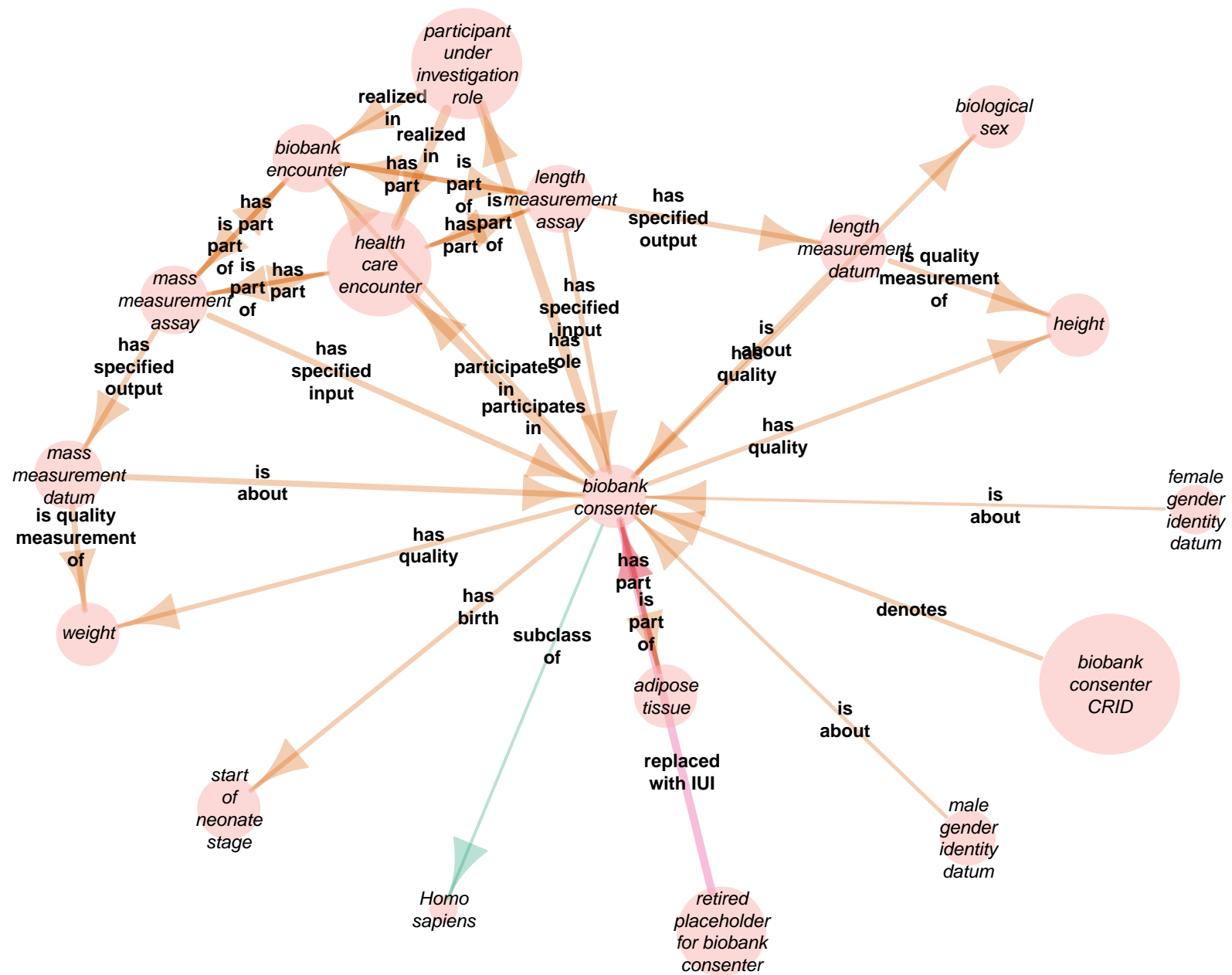
biobank consenter CRID (http://transformunify.org/ontologies/TURBO_0000503)
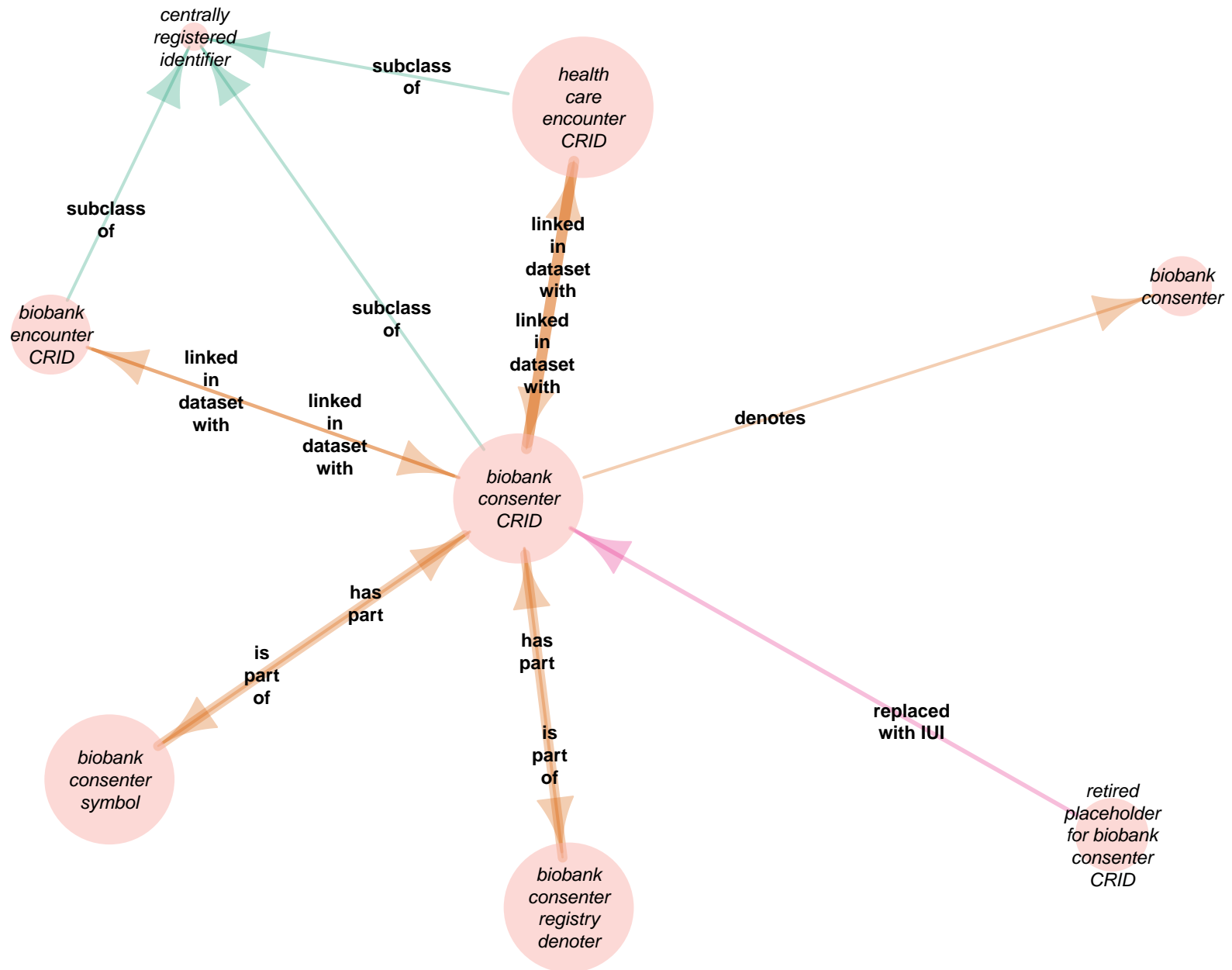
biobank consenter symbol (http://transformunify.org/ontologies/TURBO_0000504)

retired
placeholder
for biobank
consenter
symbol

**replaced
with IUI**

biobank
consenter
CRID

**has
part**

**is
part
of**

biobank
consenter
symbol

**subclass
of**

centrally
registered
identifier
symbol

**has
literal
value**

**is
part
of**

**has
part**

data
set

Title

string
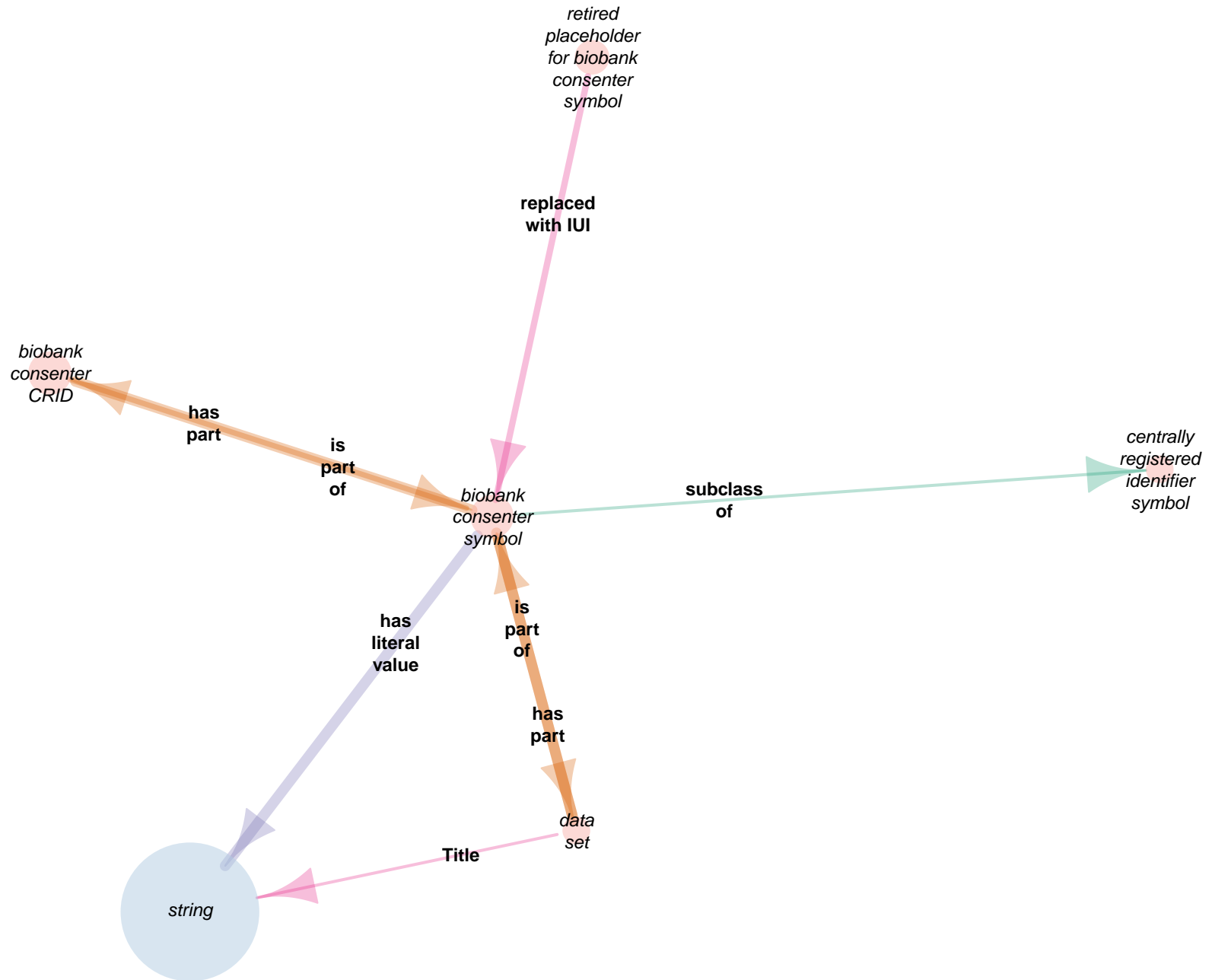
biobank consenter registry denoter (http://transformunify.org/ontologies/TURBO_0000505)

biobank consenter identifier registry (http://transformunify.org/ontologies/TURBO_0000506)

centrally registered identifier registry

subclass of

biobank consenter identifier registry

denotes
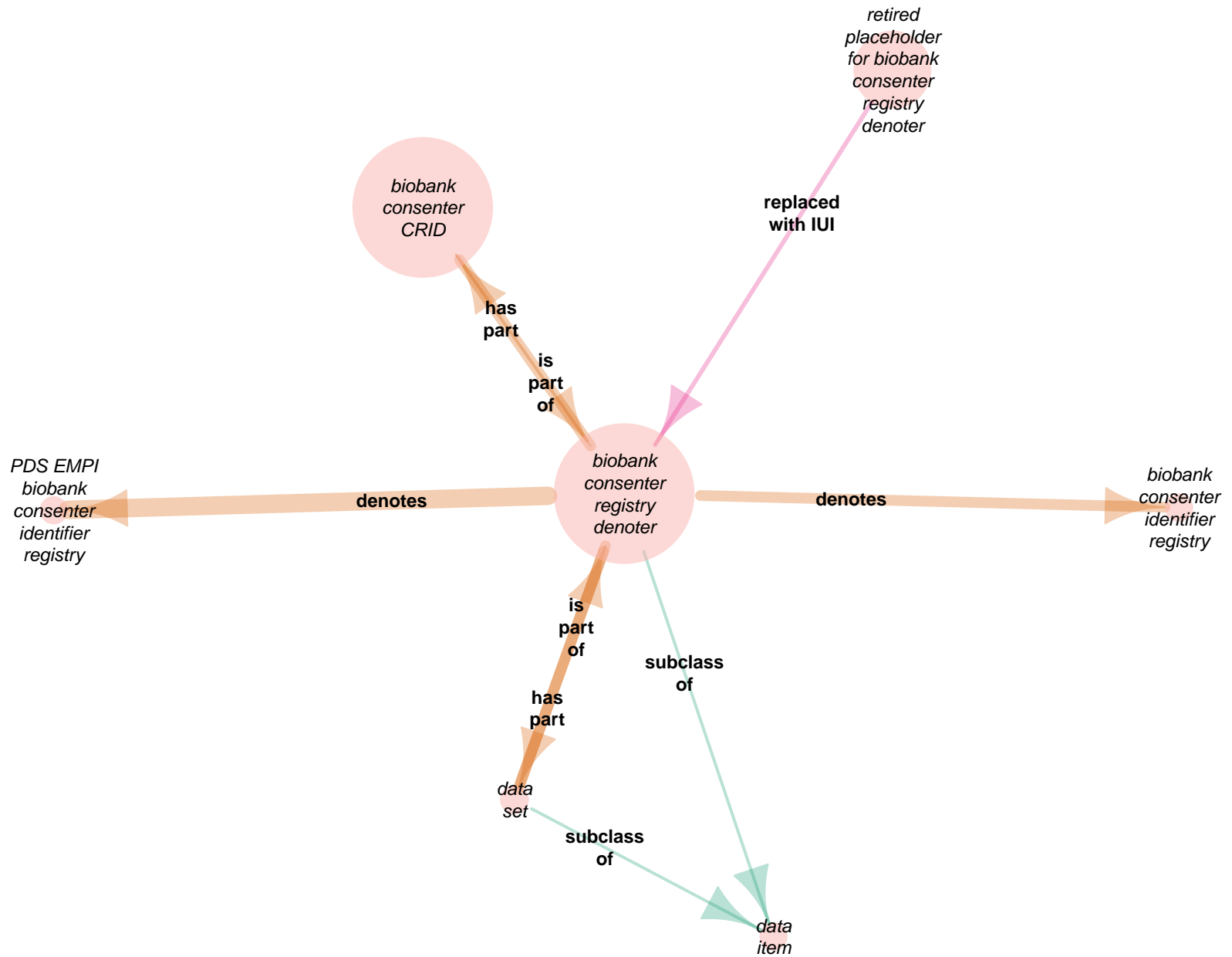
biobank consenter registry denoter
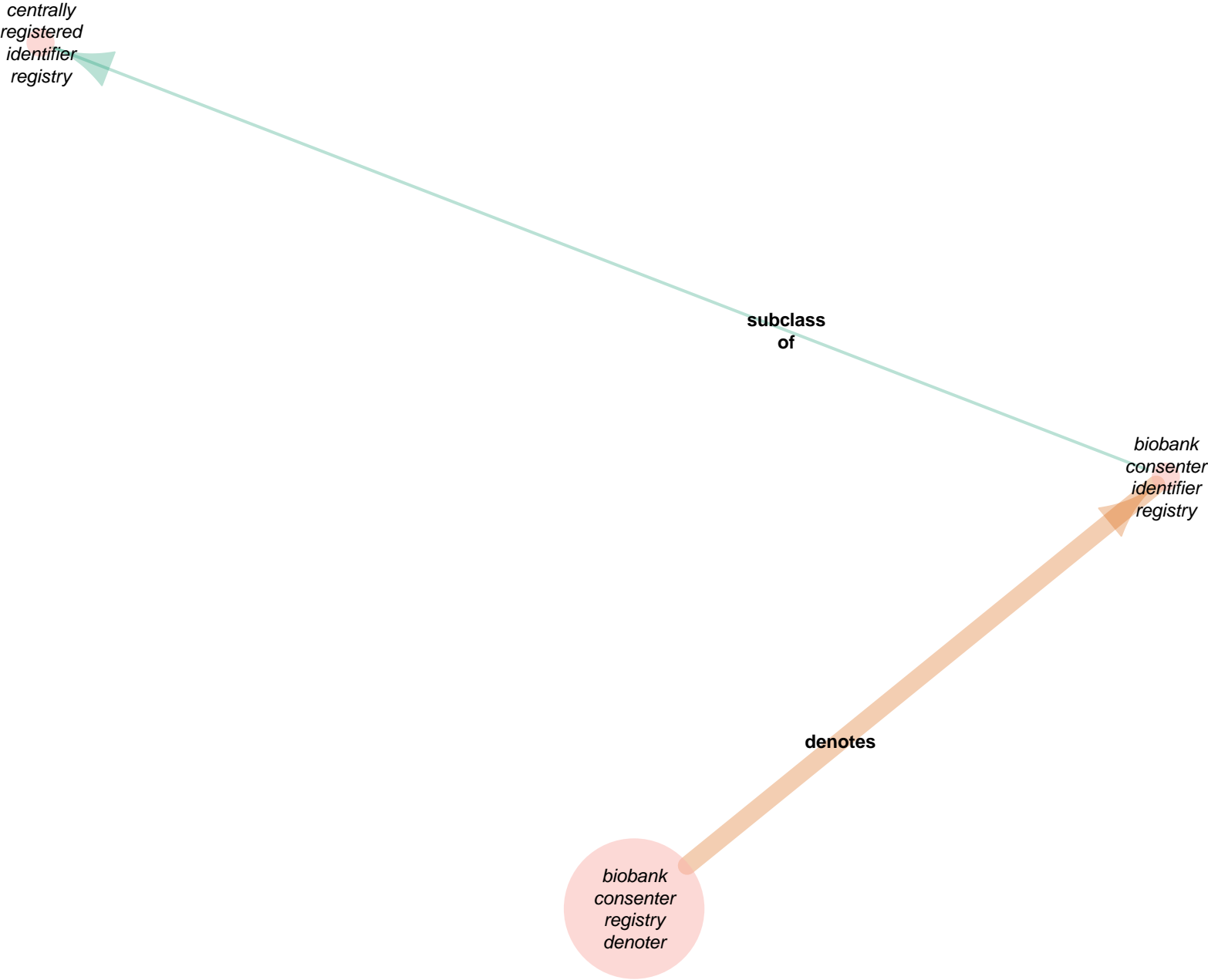
health care encounter CRID (http://transformunify.org/ontologies/TURBO_0000508)
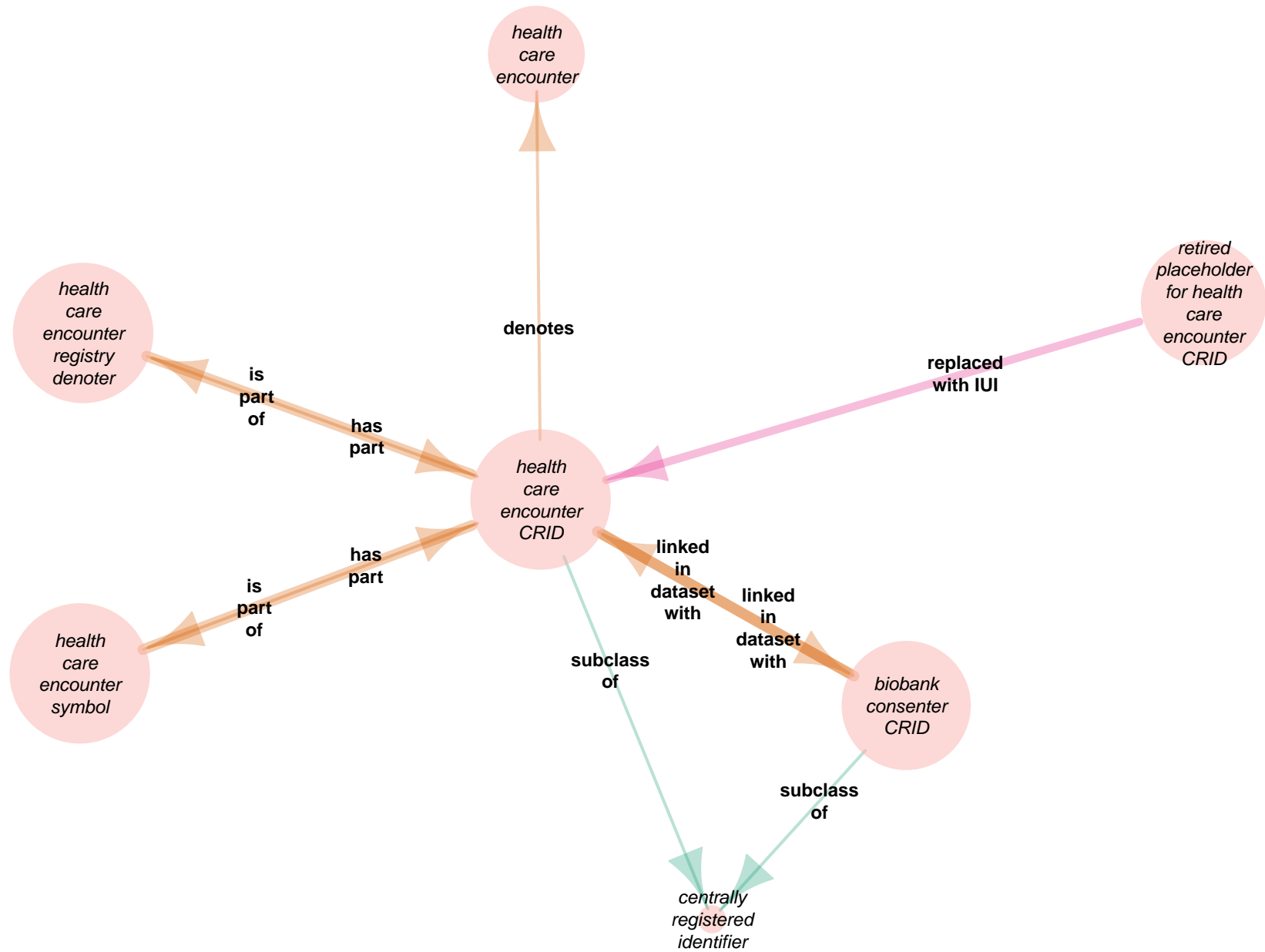
health care encounter symbol (http://transformunify.org/ontologies/TURBO_0000509)
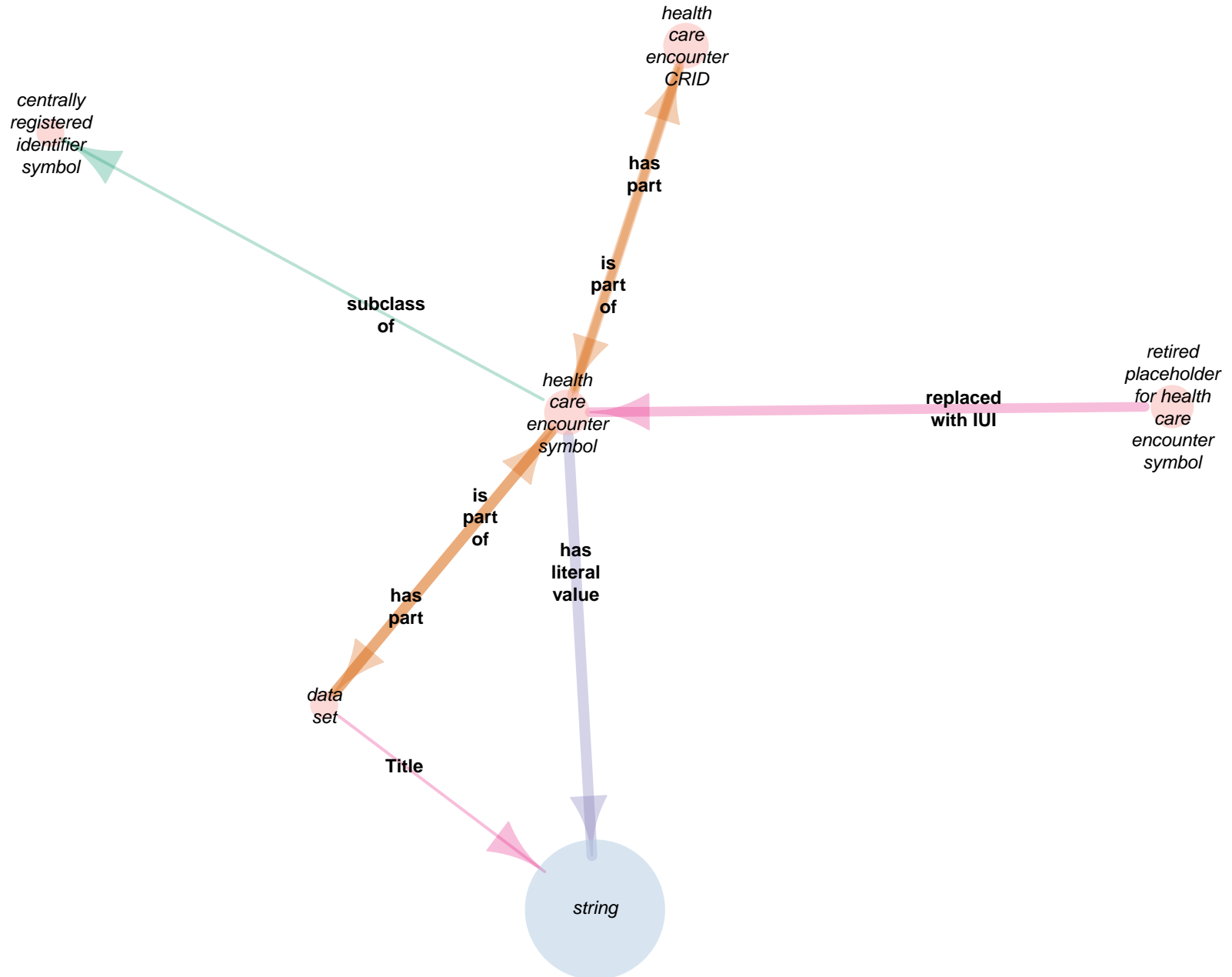
health care encounter CRID

centrally registered identifier symbol

has part

is part of

subclass of

health care encounter symbol

replaced with IUI

retired placeholder for health care encounter symbol

is part of

has literal value

has part

data set

Title

string

health care encounter registry denoter (http://transformunify.org/ontologies/TURBO_0000510)

health care encounter start (http://transformunify.org/ontologies/TURBO_0000511)

process boundary

subclass of

health care encounter ← **starts** — *health care encounter start* ← **replaced with IUI** — *retired placeholder for health care encounter start*

is about
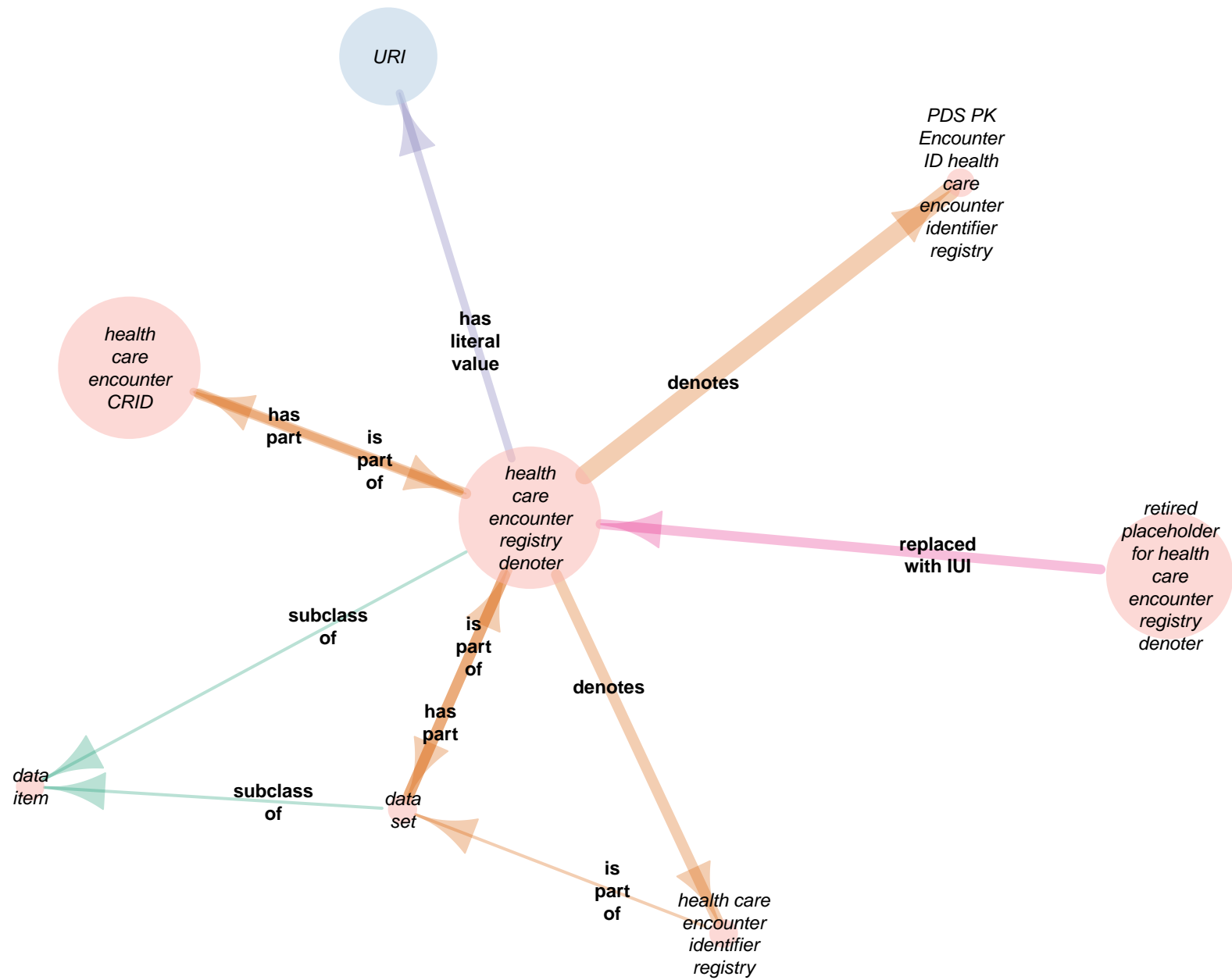
health care encounter start date
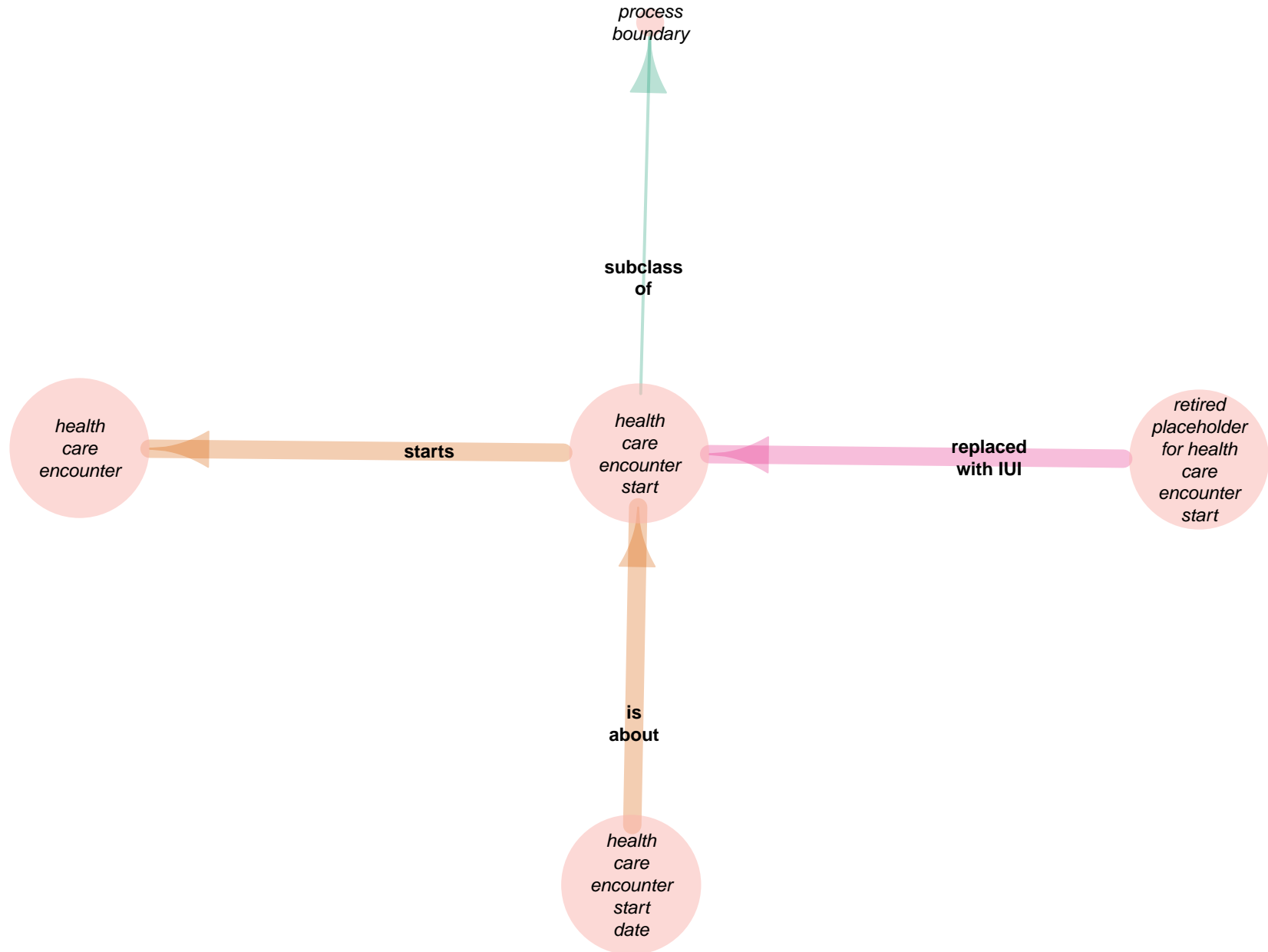
health care encounter start date (http://transformunify.org/ontologies/TURBO_0000512)

health care encounter identifier registry (http://transformunify.org/ontologies/TURBO_0000513)

data set

health care encounter identifier registry

centrally registered identifier registry

health care encounter registry denoter

has part

is part of

is part of

denotes

subclass of
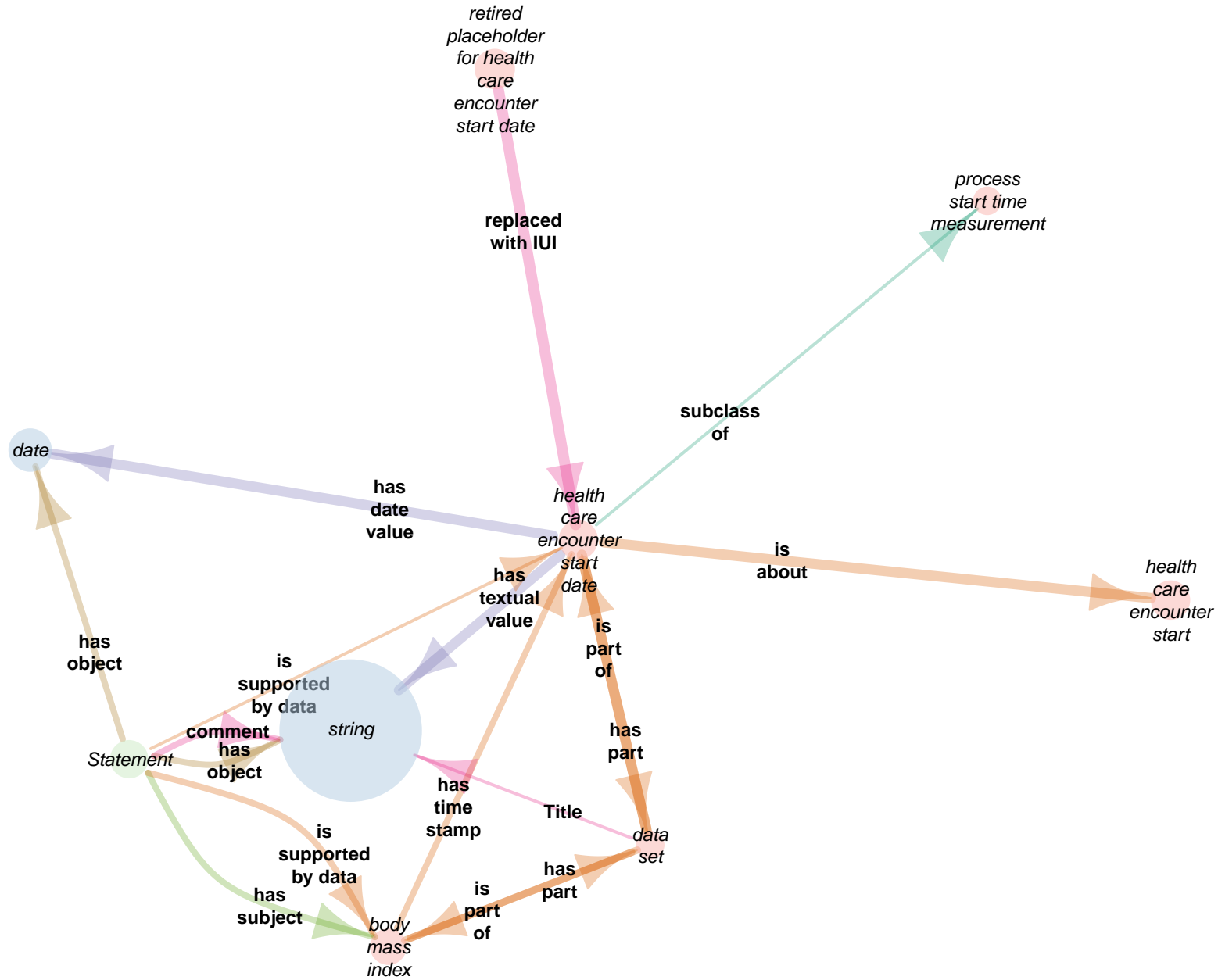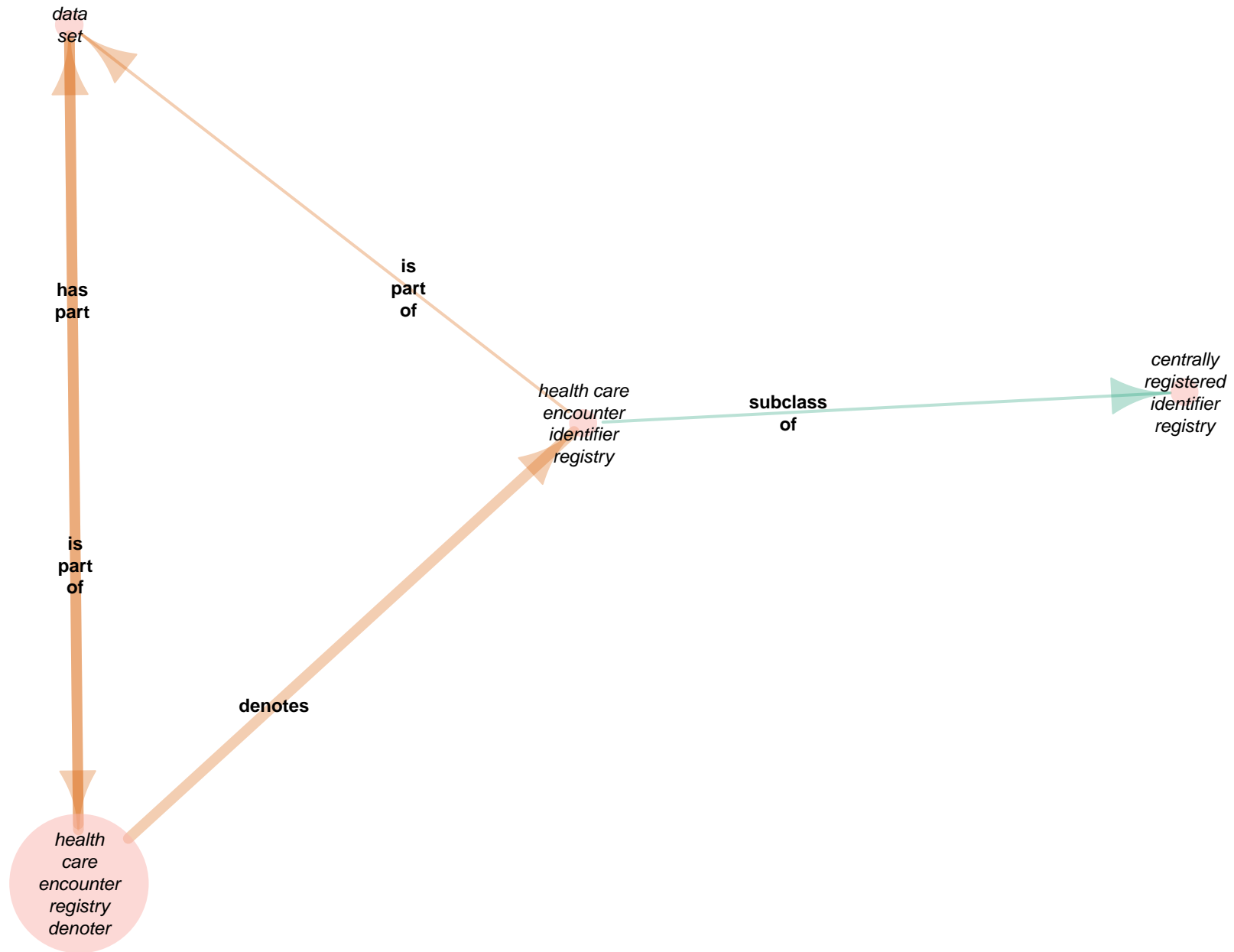
R2R instantiation (http://transformunify.org/ontologies/TURBO_0000522)

data
transformation

subclass
of

R2R
instantiation

has
specified
input

data
set
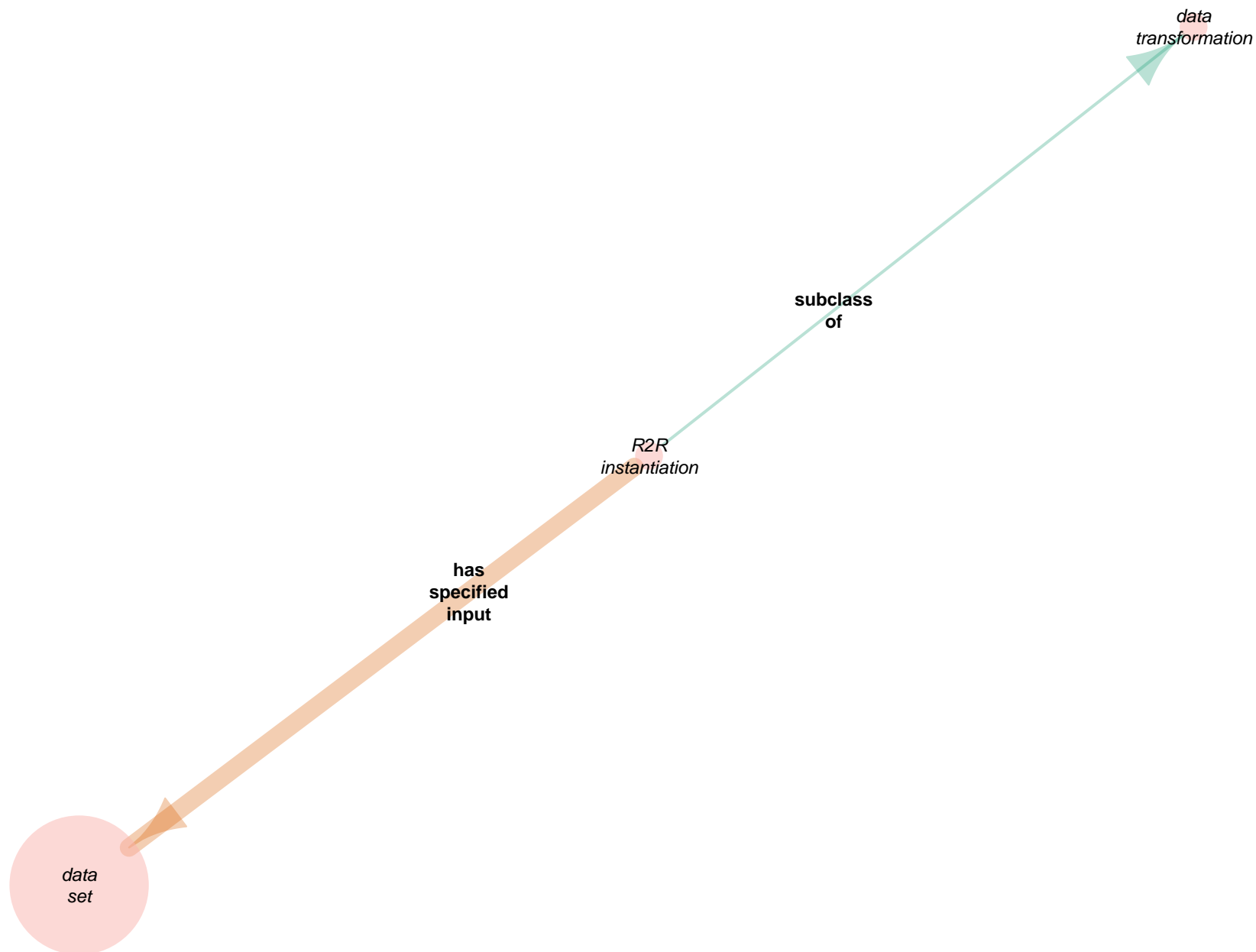
biobank encounter (http://transformunify.org/ontologies/TURBO_0000527)
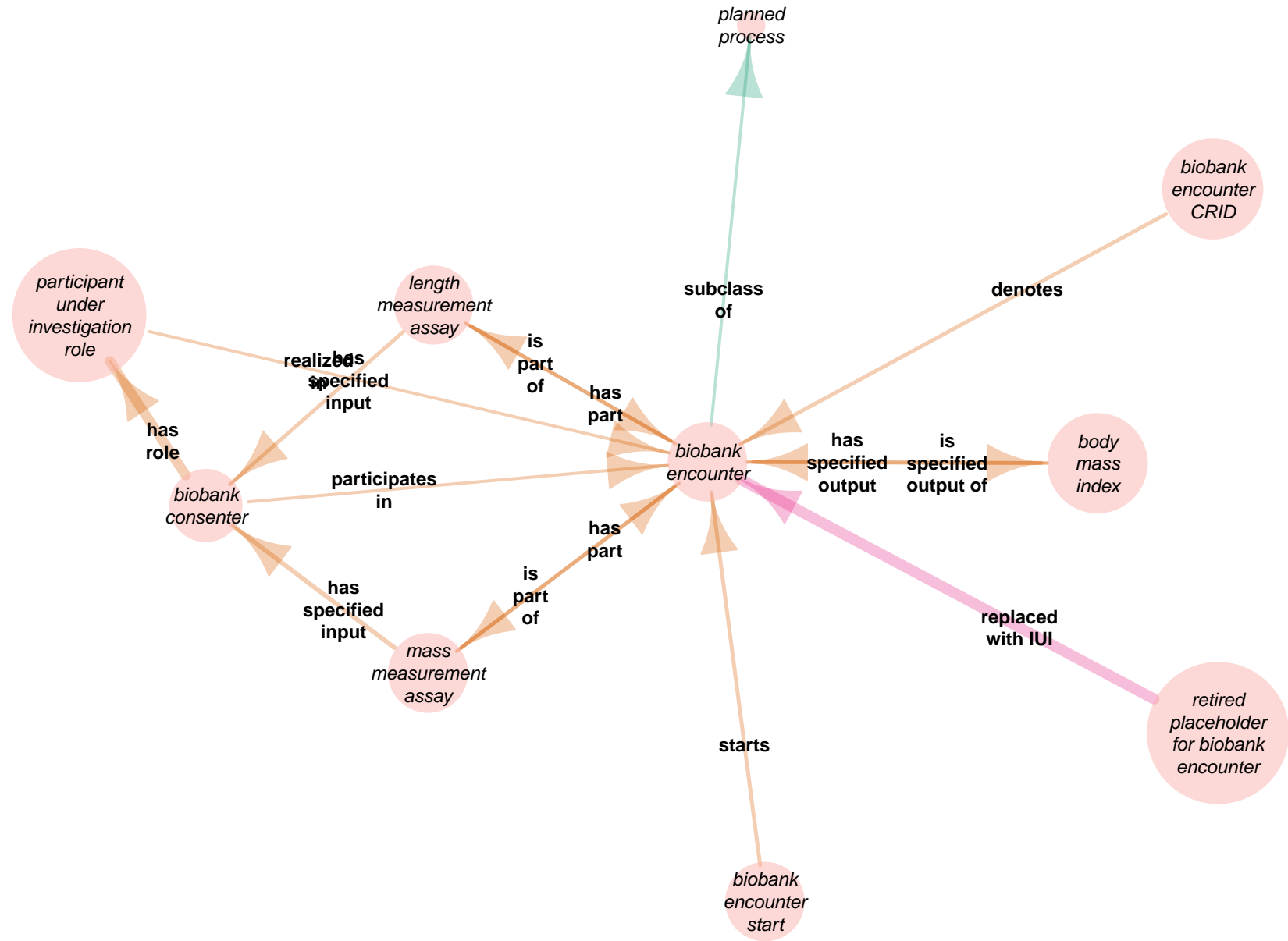
biobank encounter start (http://transformunify.org/ontologies/TURBO_0000531)
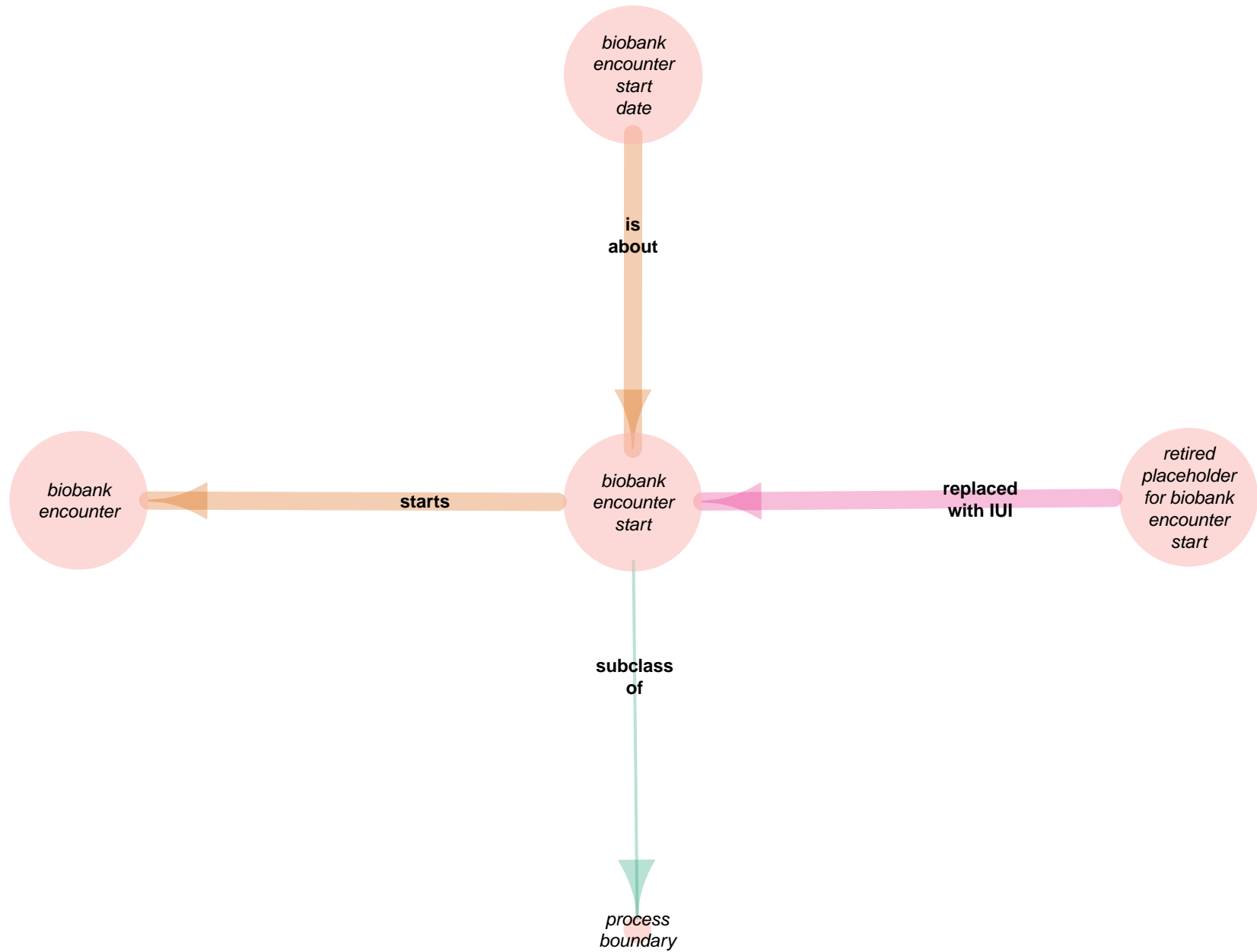
biobank encounter start date (http://transformunify.org/ontologies/TURBO_0000532)
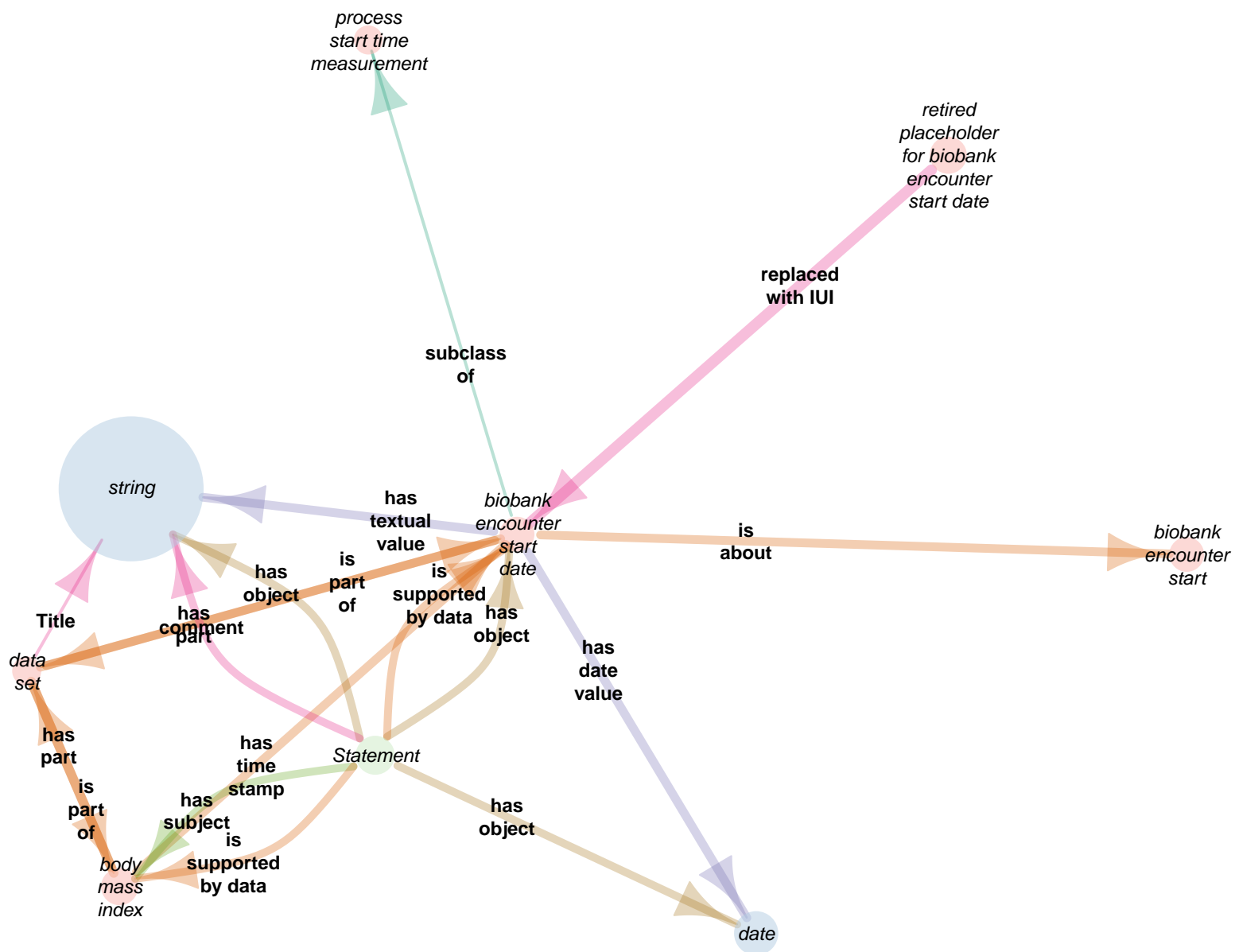
biobank encounter CRID (http://transformunify.org/ontologies/TURBO_0000533)
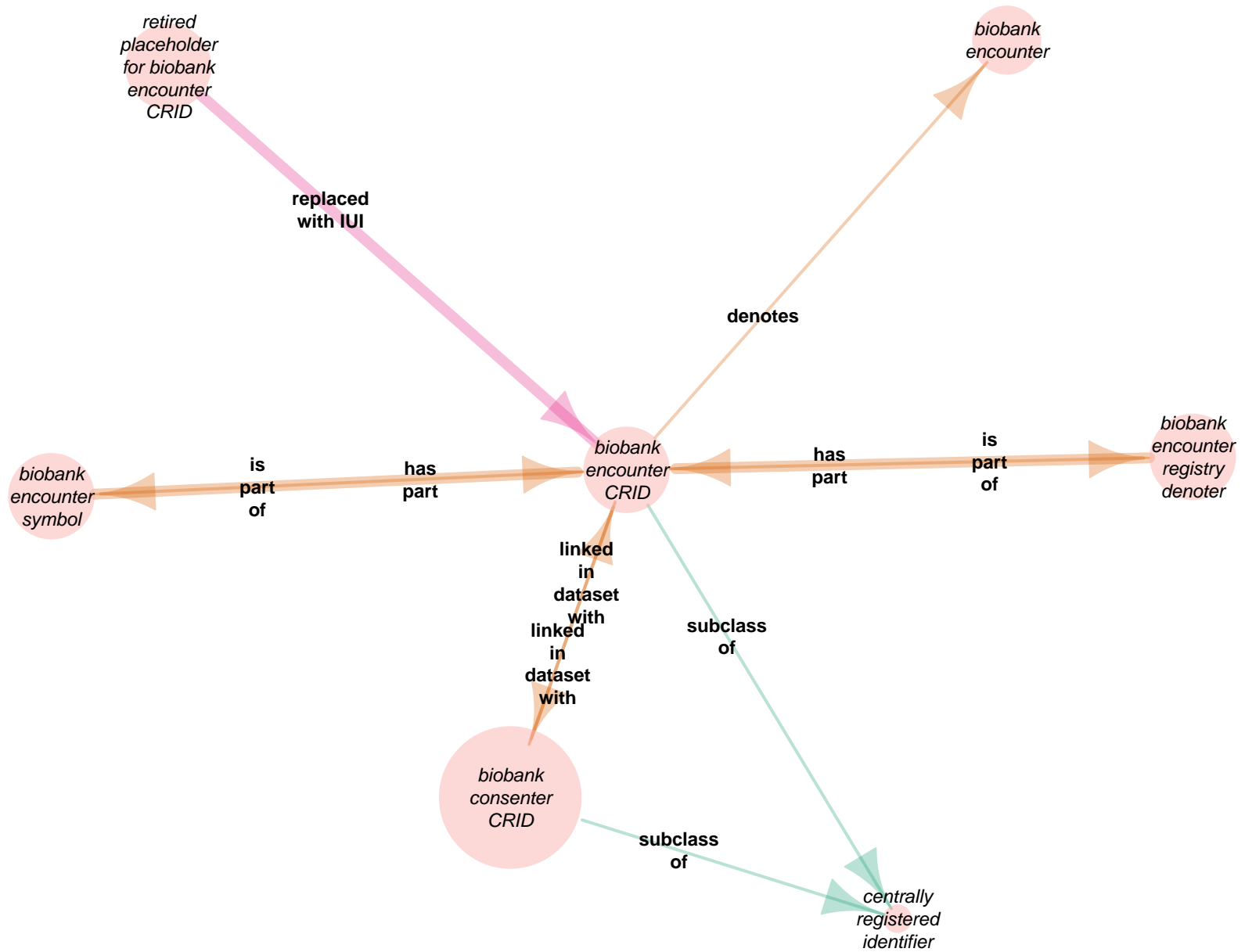
biobank encounter symbol (http://transformunify.org/ontologies/TURBO_0000534)
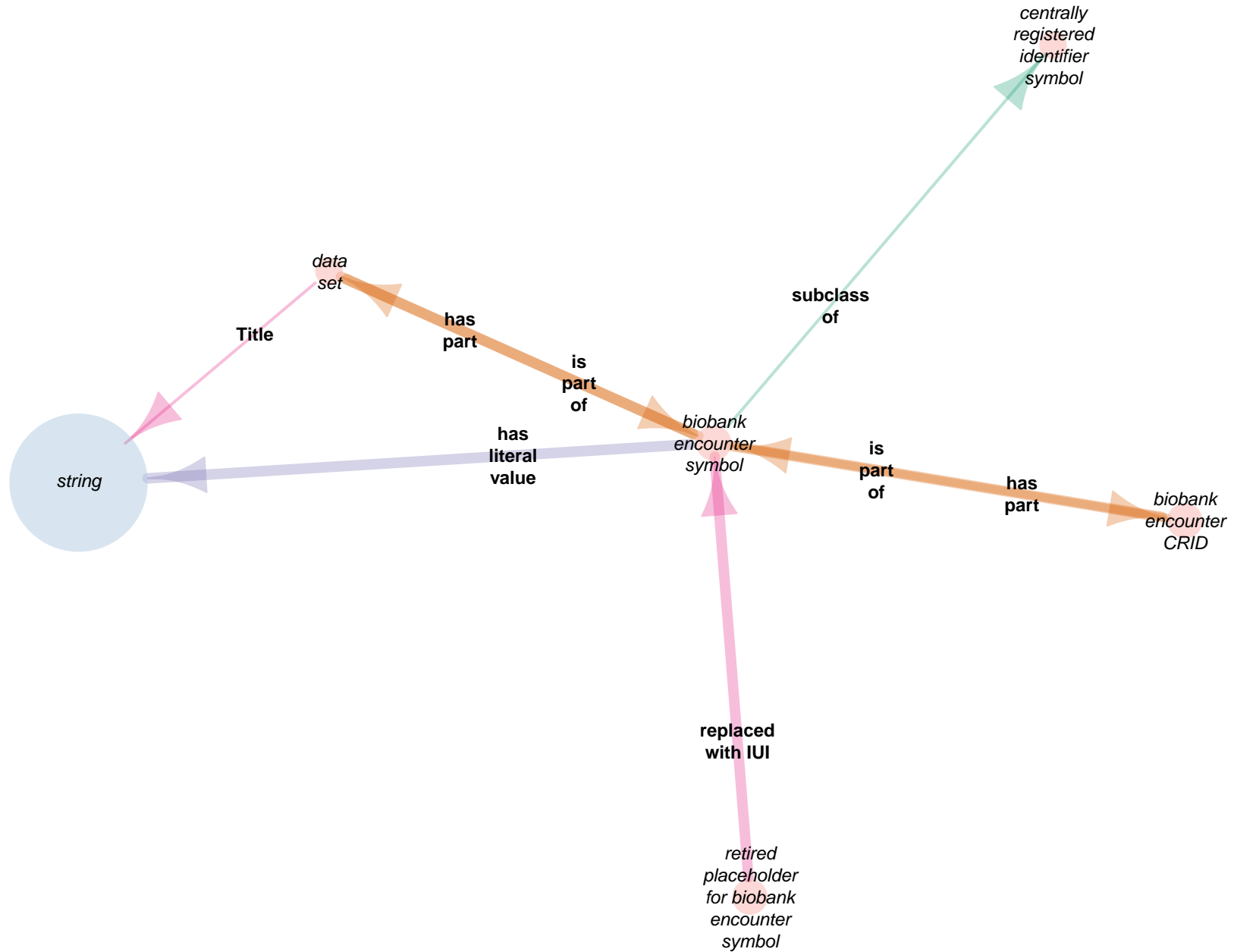
biobank encounter registry denoter (http://transformunify.org/ontologies/TURBO_0000535)
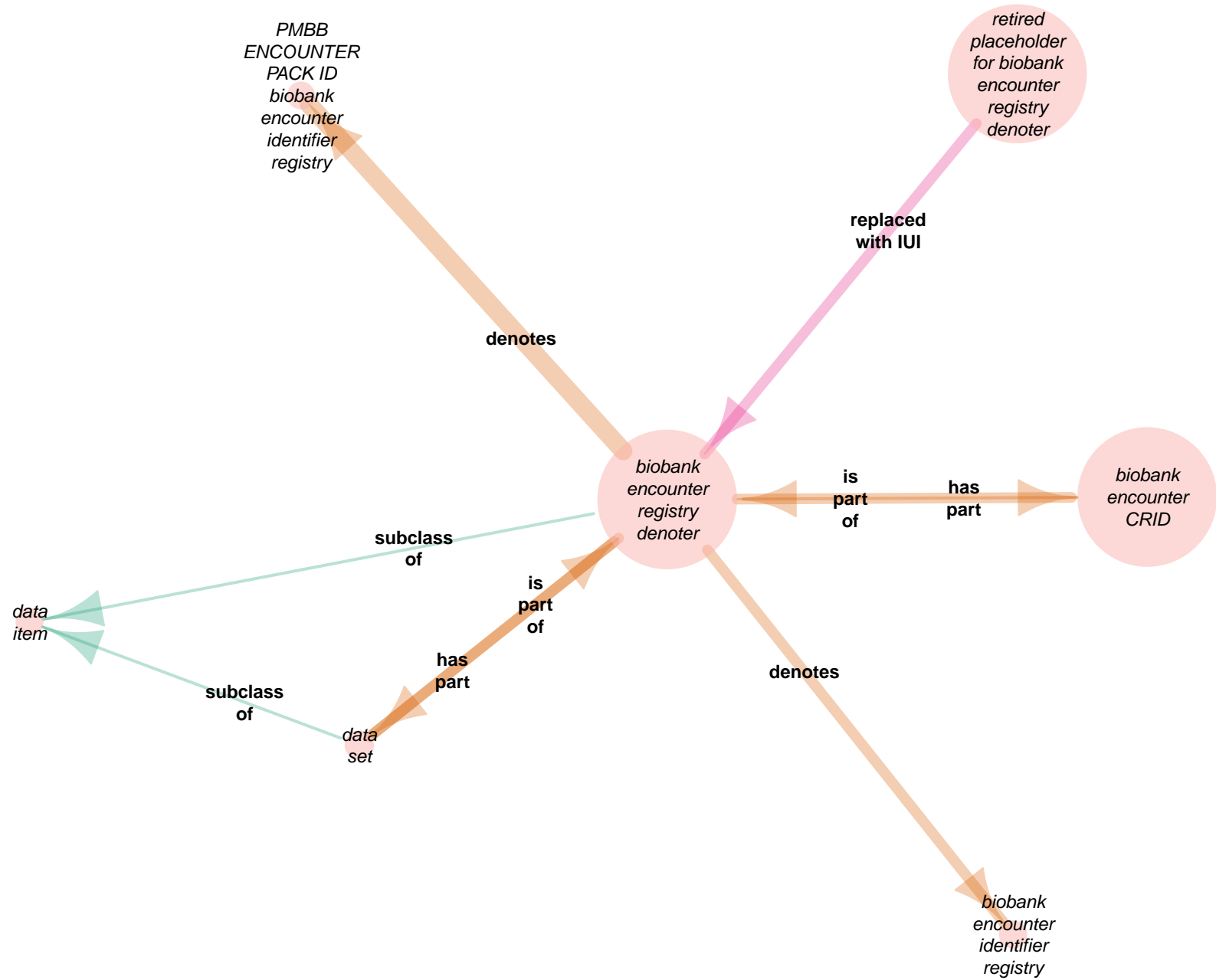
biobank encounter identifier registry (http://transformunify.org/ontologies/TURBO_0000543)
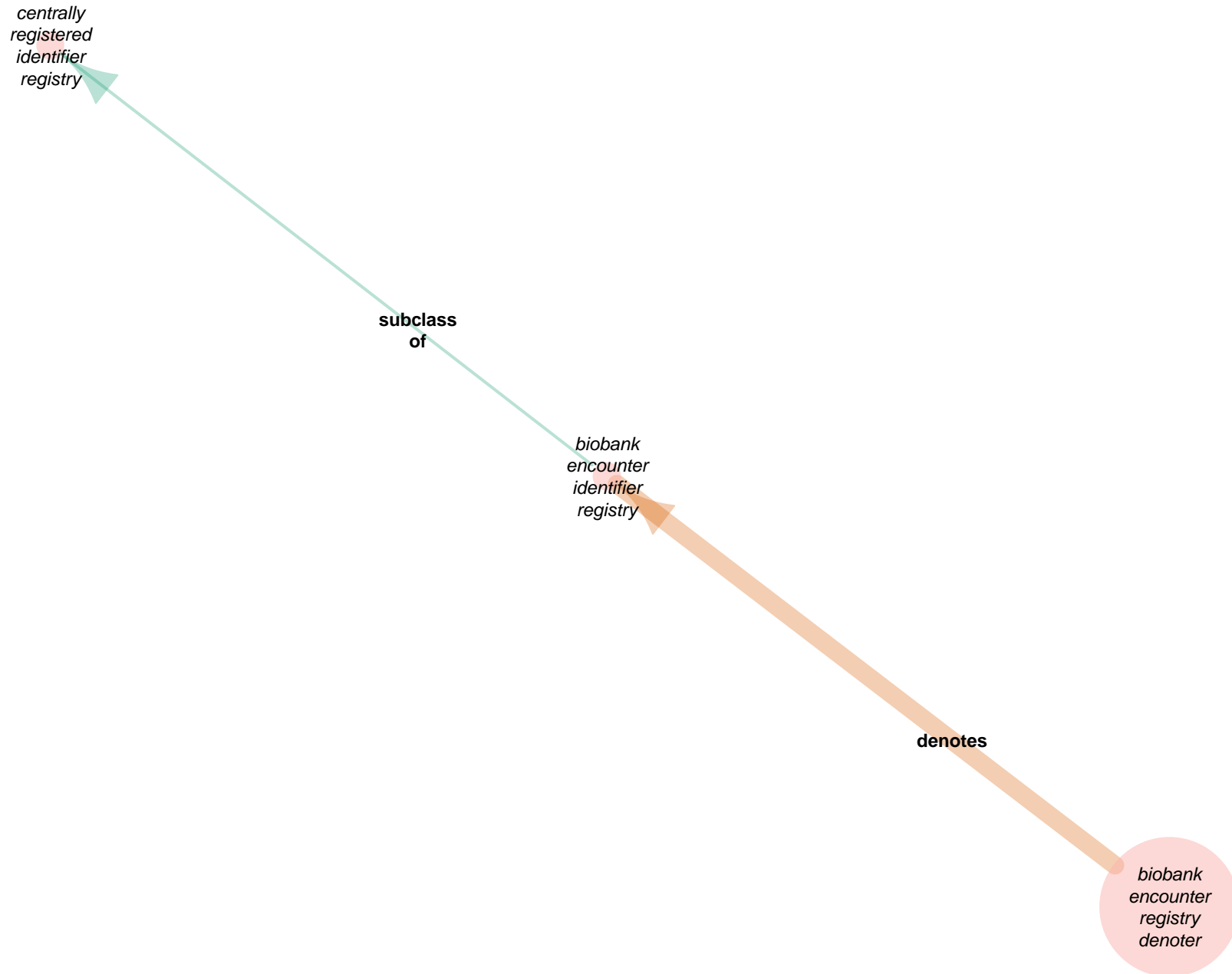
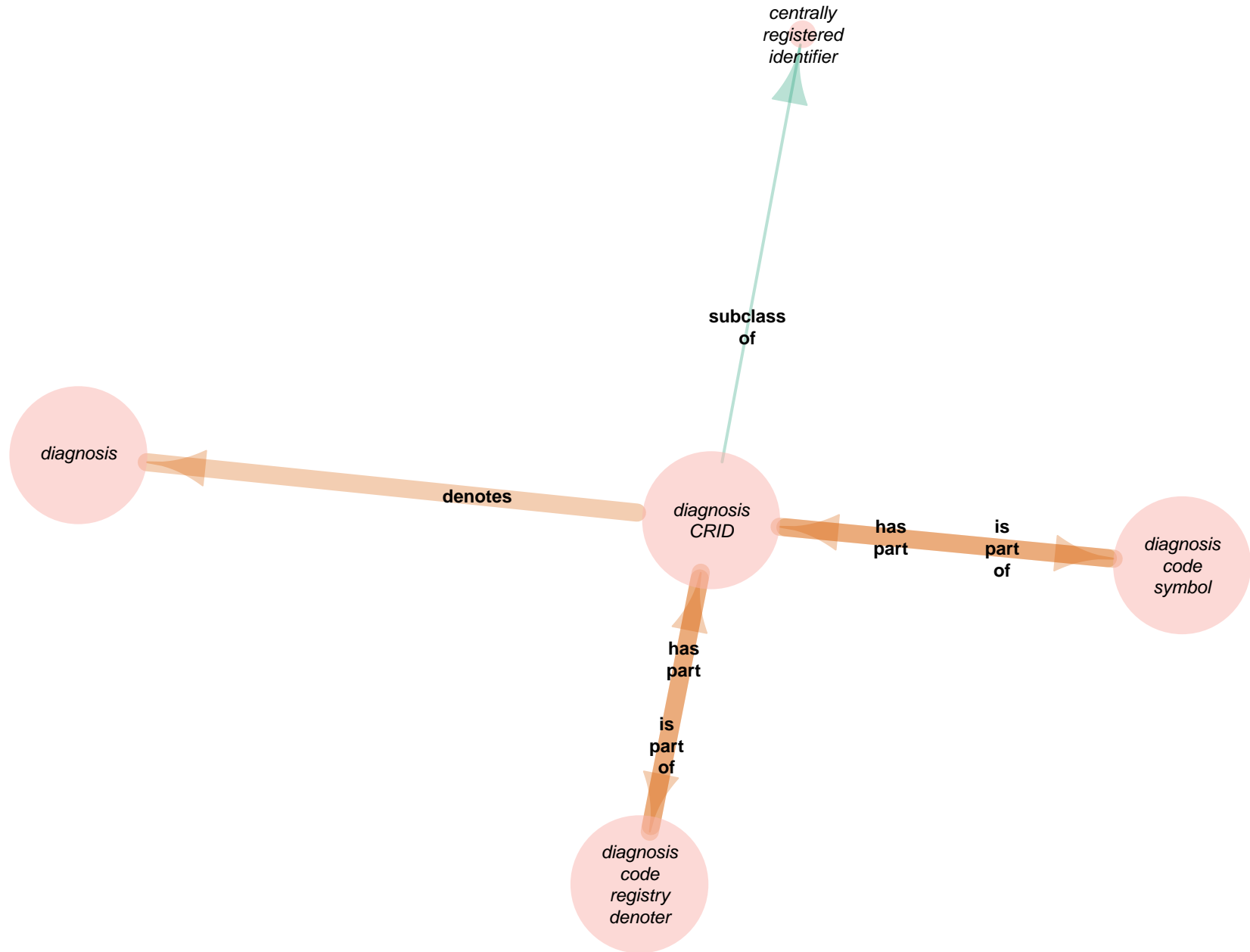*centrally registered identifier registry*

subclass of
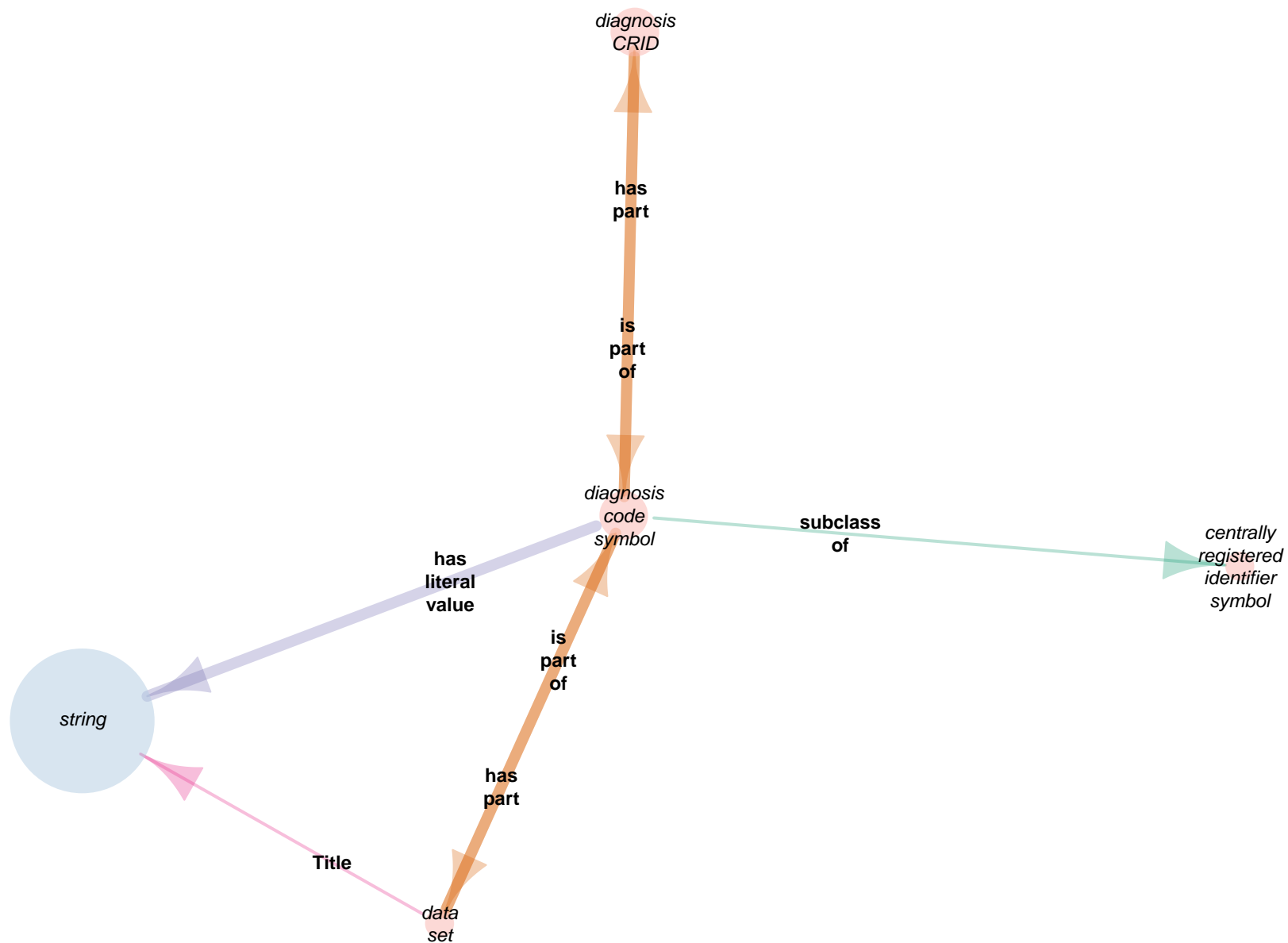
biobank encounter identifier registry

denotes

biobank encounter registry denoter

diagnosis CRID (http://transformunify.org/ontologies/TURBO_0000553)

diagnosis code symbol (http://transformunify.org/ontologies/TURBO_0000554)

diagnosis code registry denoter (http://transformunify.org/ontologies/TURBO_0000555)
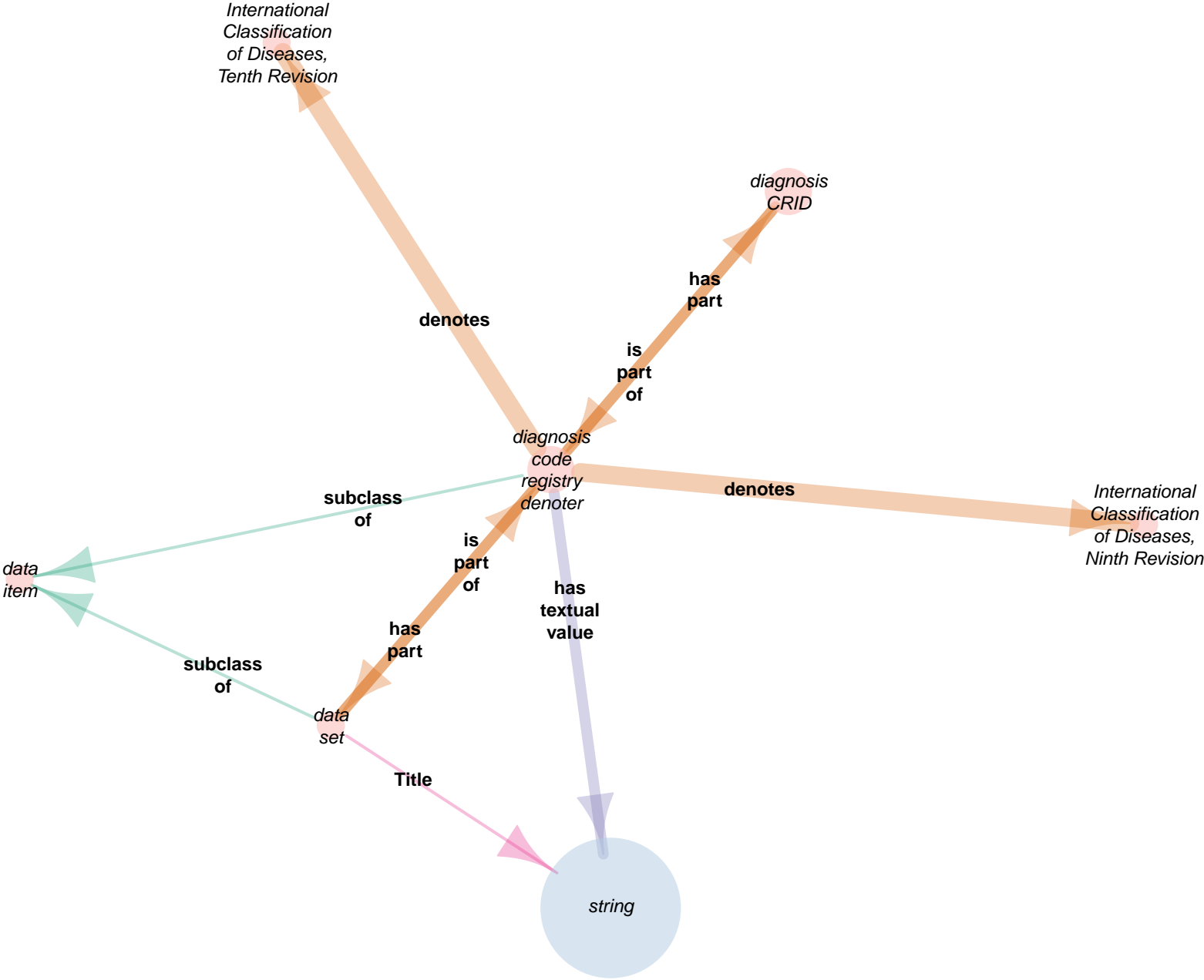
prescription CRID (http://transformunify.org/ontologies/TURBO_0000561)
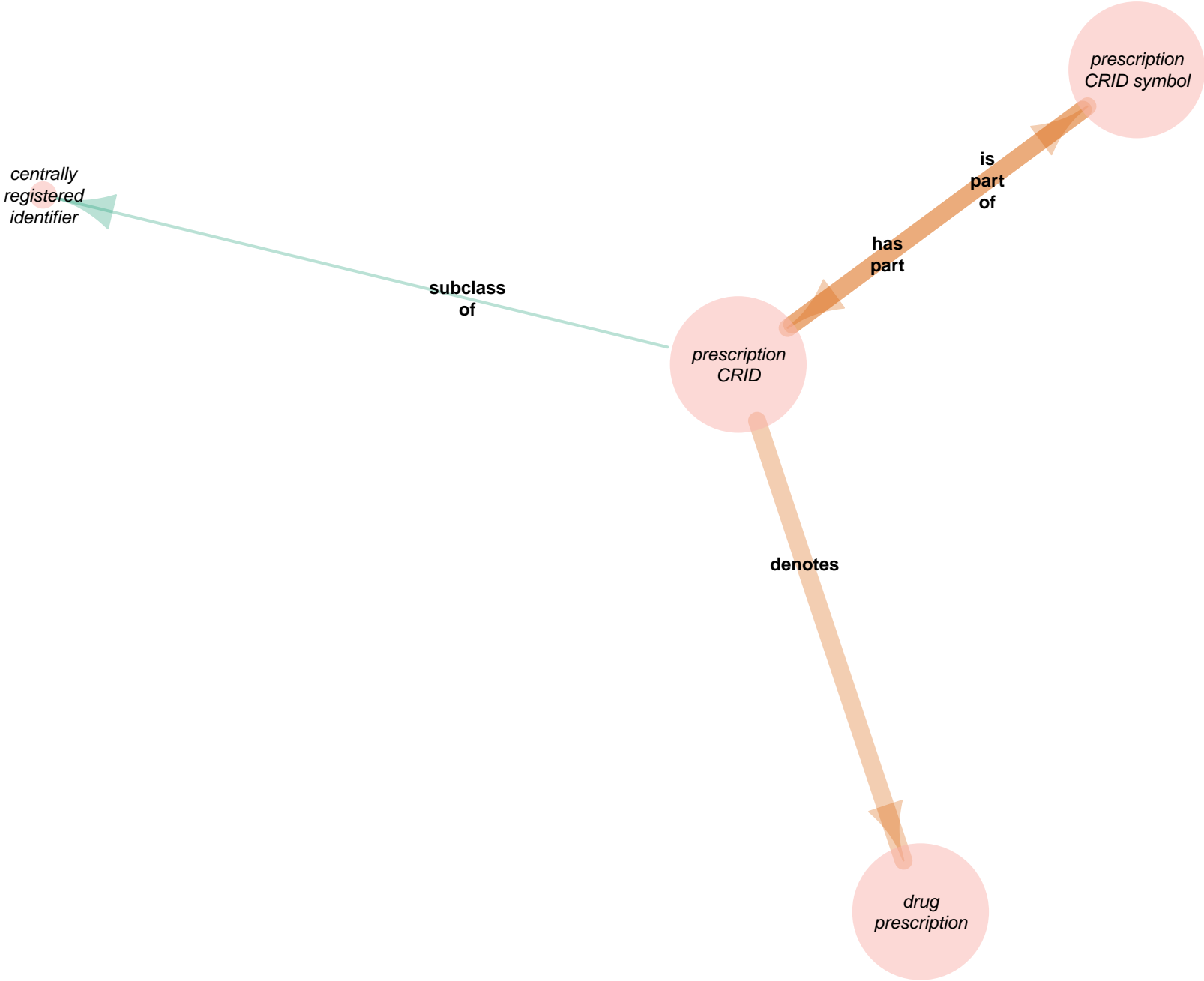
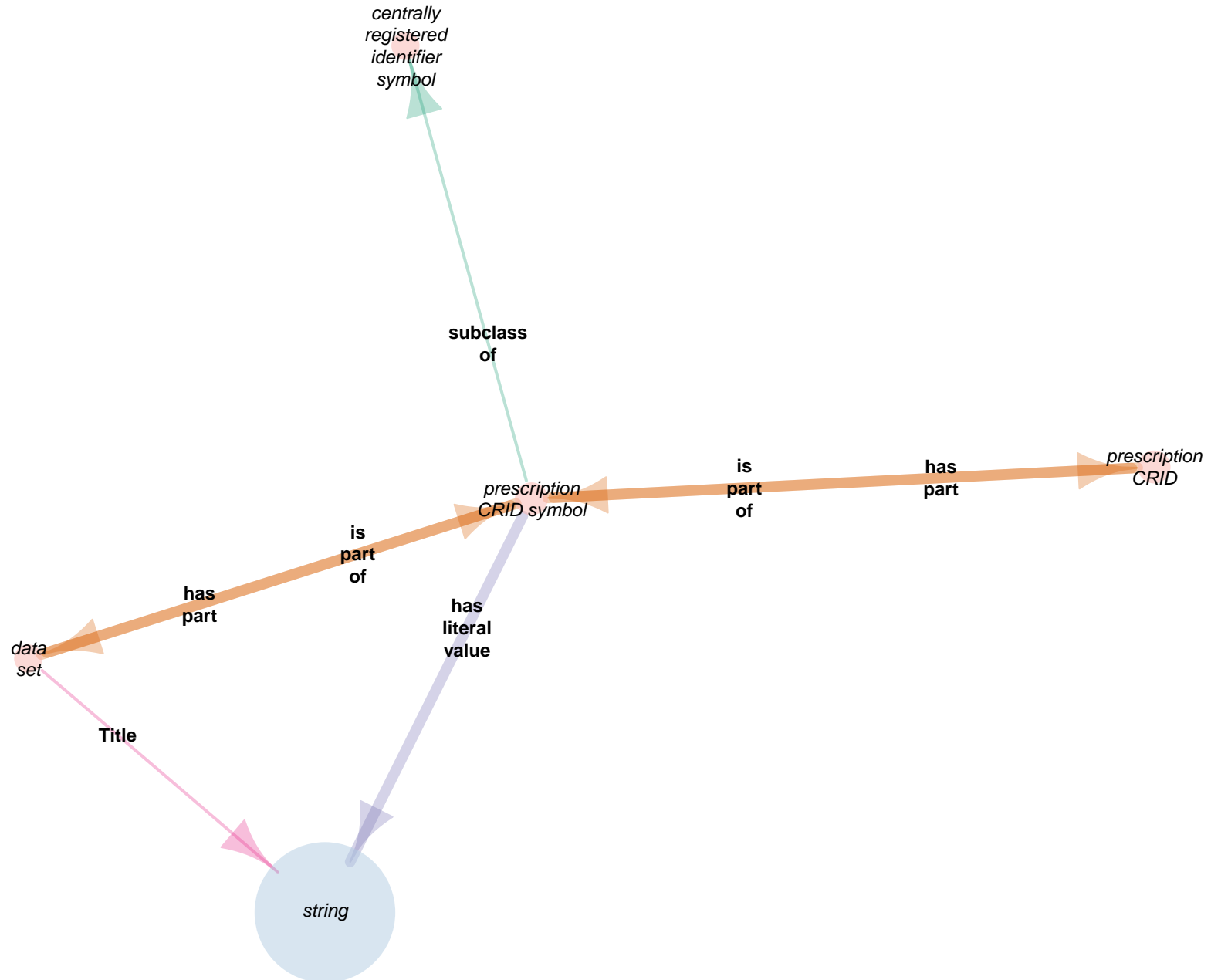# prescription CRID symbol (http://transformunify.org/ontologies/TURBO_0000562)

centrally registered identifier symbol

subclass of

prescription CRID symbol

is part of

has part

prescription CRID

is part of

has part

has literal value

data set

Title

string

retired placeholder for biobank consenter (http://transformunify.org/ontologies/TURBO_0000902)
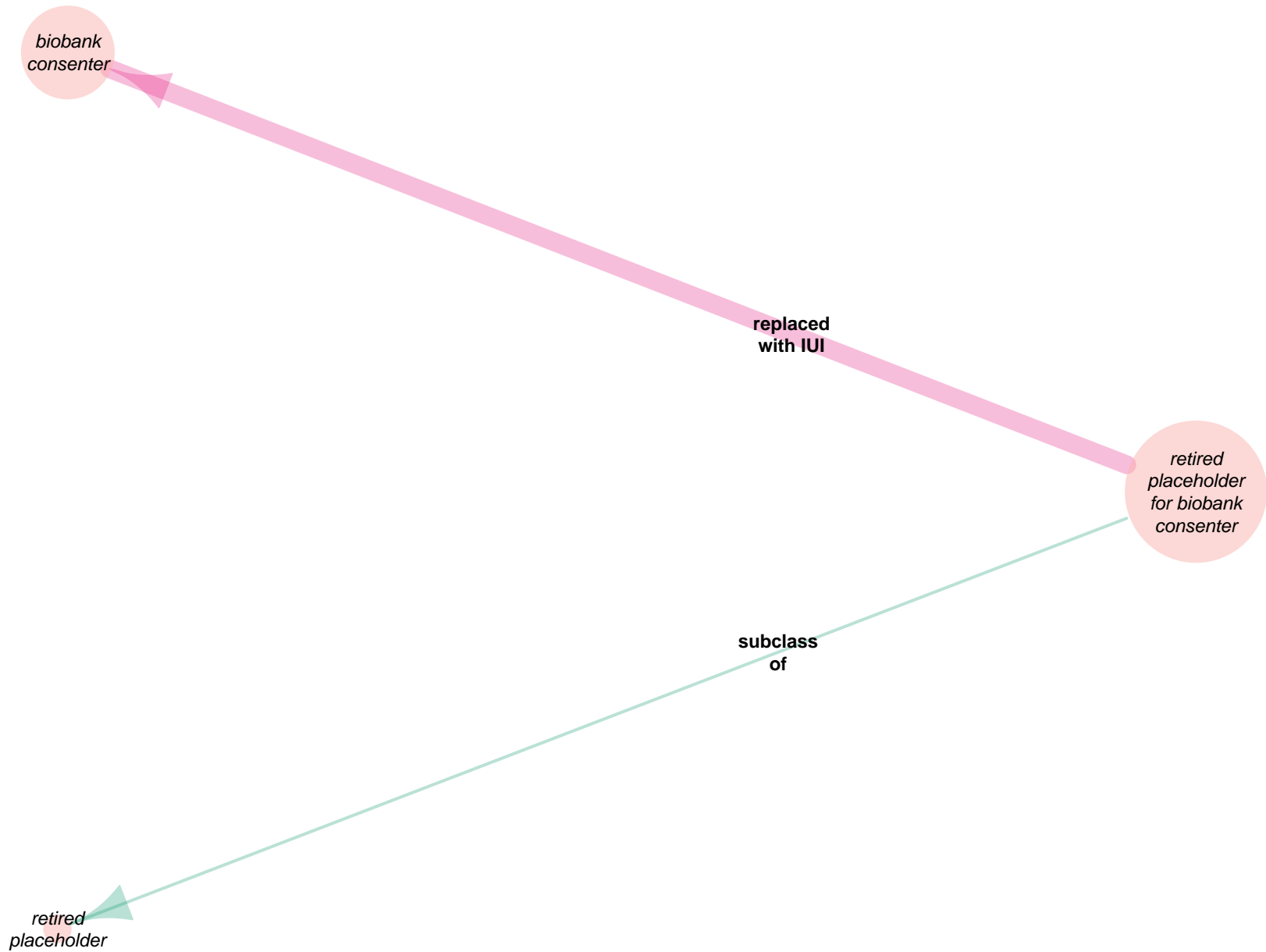
retired placeholder for biobank consenter CRID (http://transformunify.org/ontologies/TURBO_0000903)
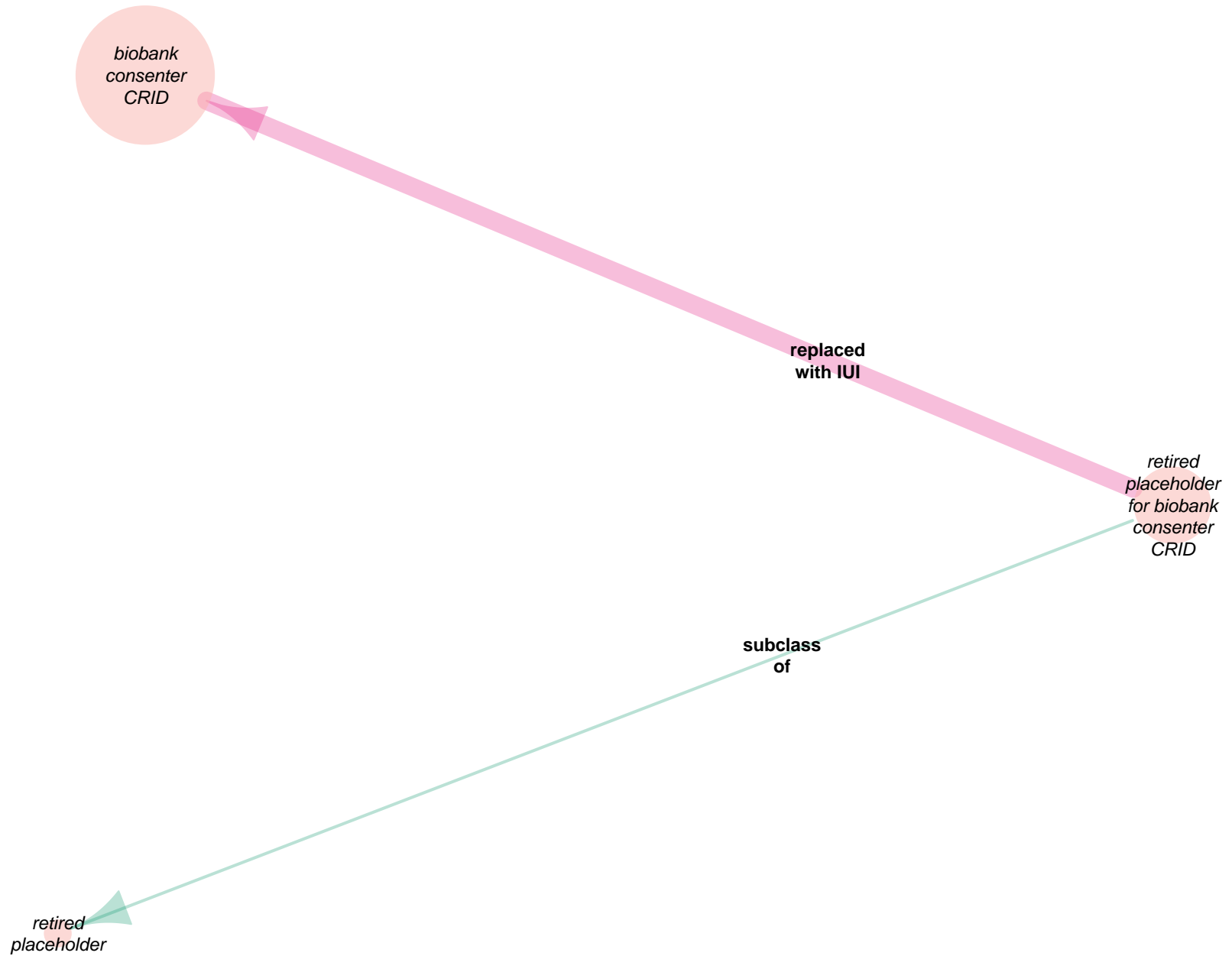
retired placeholder for biobank consenter symbol (http://transformunify.org/ontologies/TURBO_0000904)
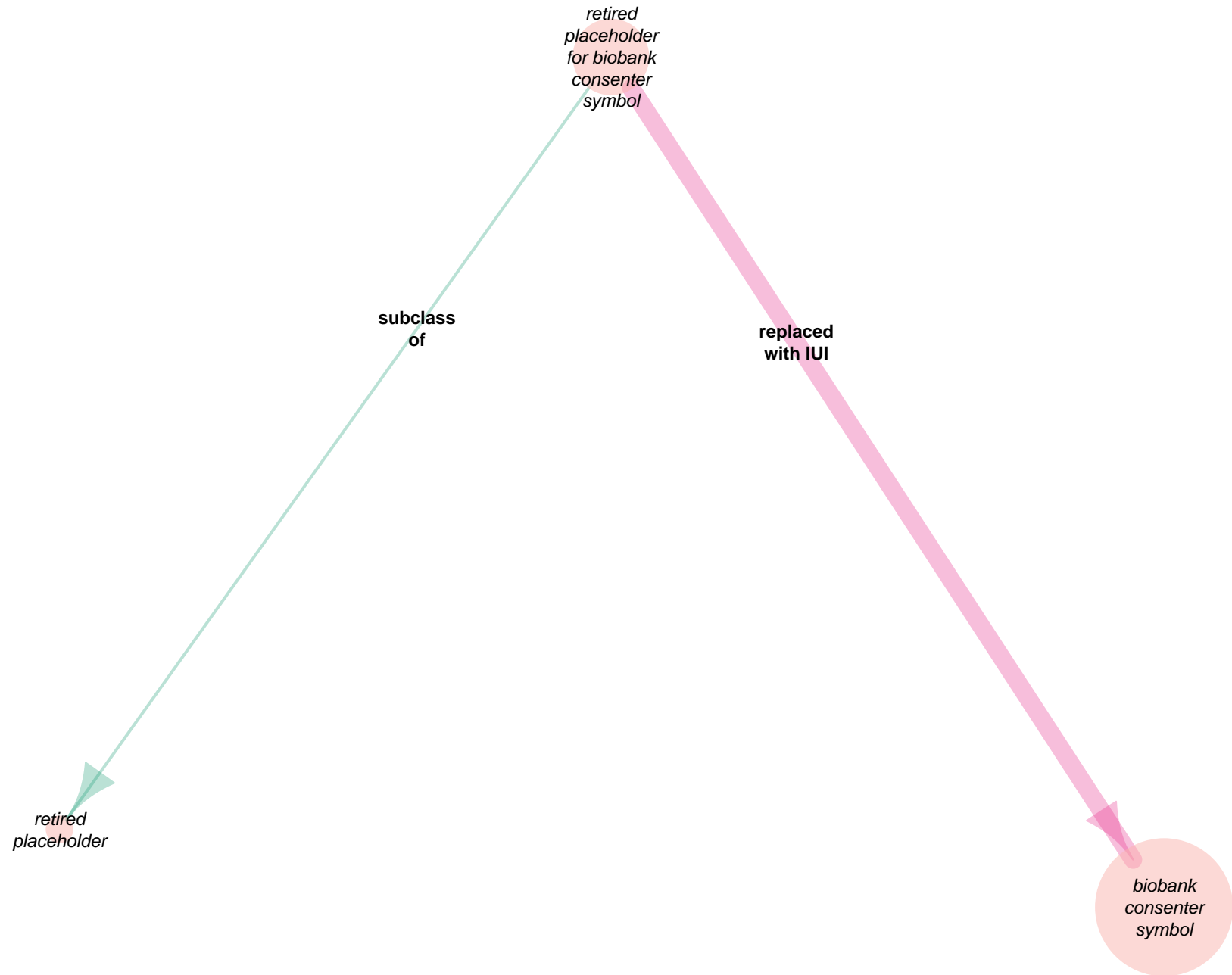
retired placeholder for biobank consenter symbol

subclass of

replaced with IUI

retired placeholder

biobank consenter symbol

retired placeholder for biobank consenter registry denoter (http://transformunify.org/ontologies/TURBO_0000905)

retired placeholder

subclass of

retired placeholder for biobank consenter registry denoter

replaced with IUI

biobank consenter registry denoter
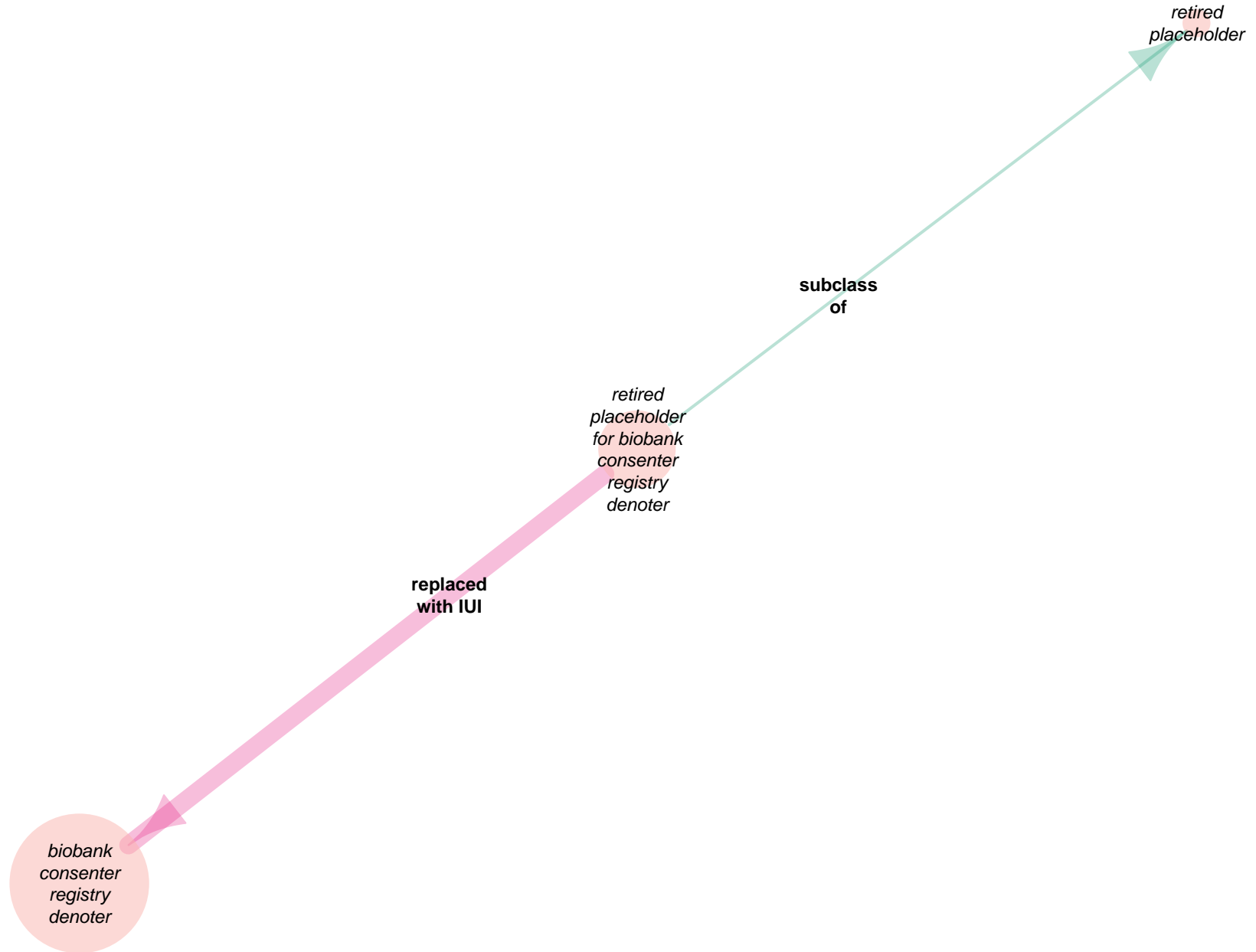
retired placeholder for health care encounter (http://transformunify.org/ontologies/TURBO_0000907)

retired placeholder

subclass of

retired placeholder for health care encounter

replaced with IUI

health care encounter
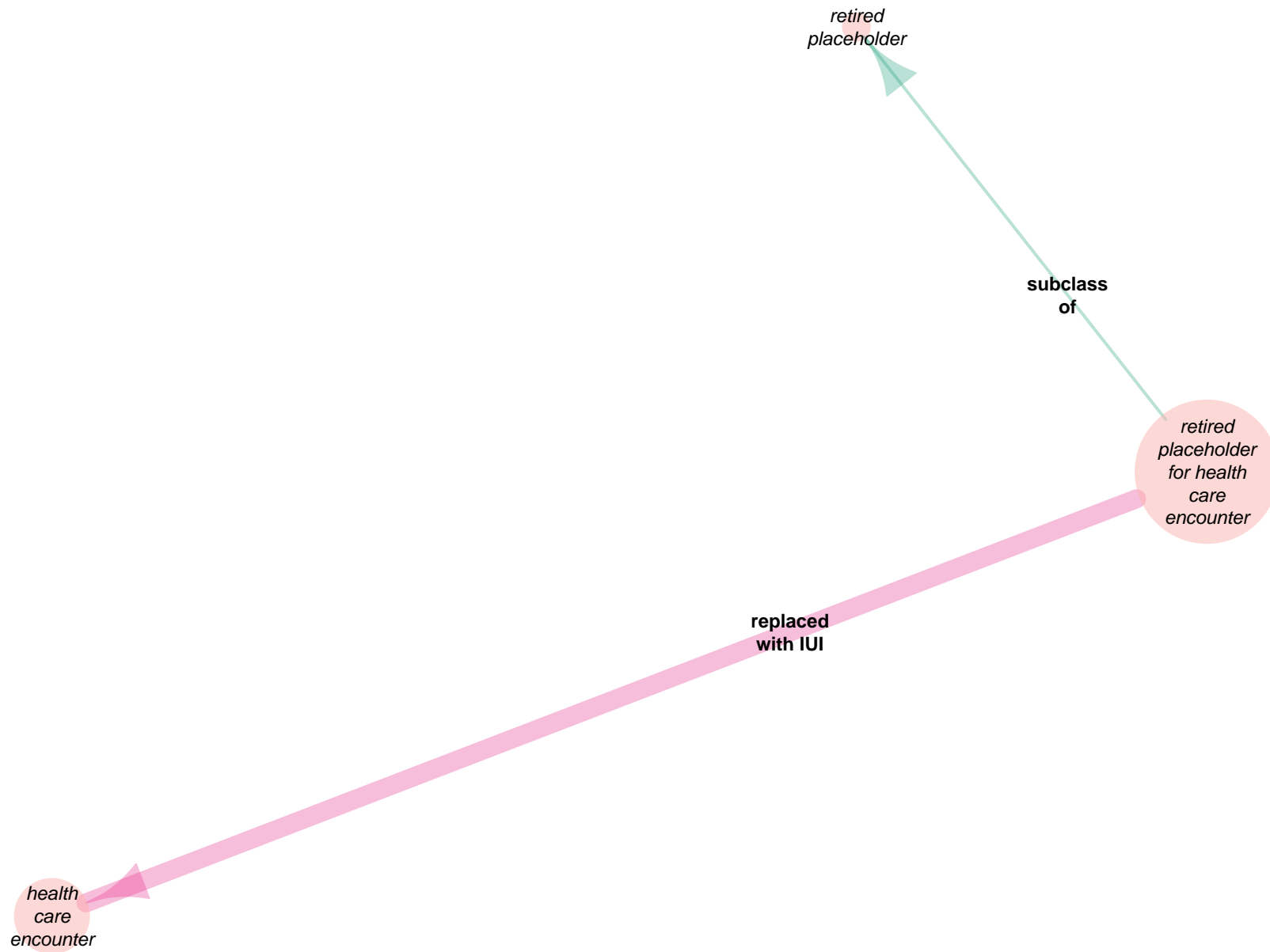
retired placeholder for health care encounter CRID (http://transformunify.org/ontologies/TURBO_0000908)
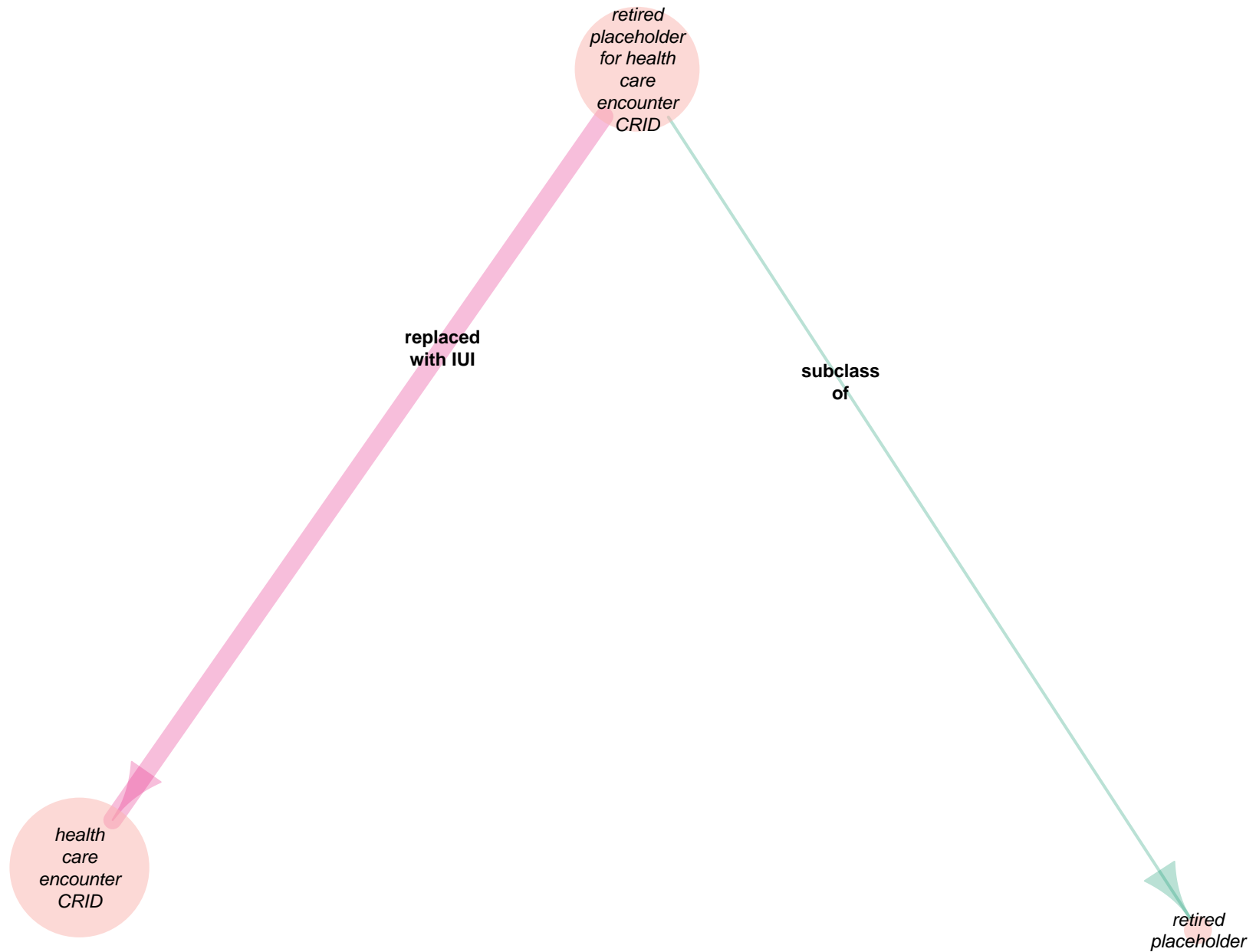
retired placeholder for health care encounter symbol (http://transformunify.org/ontologies/TURBO_0000909)
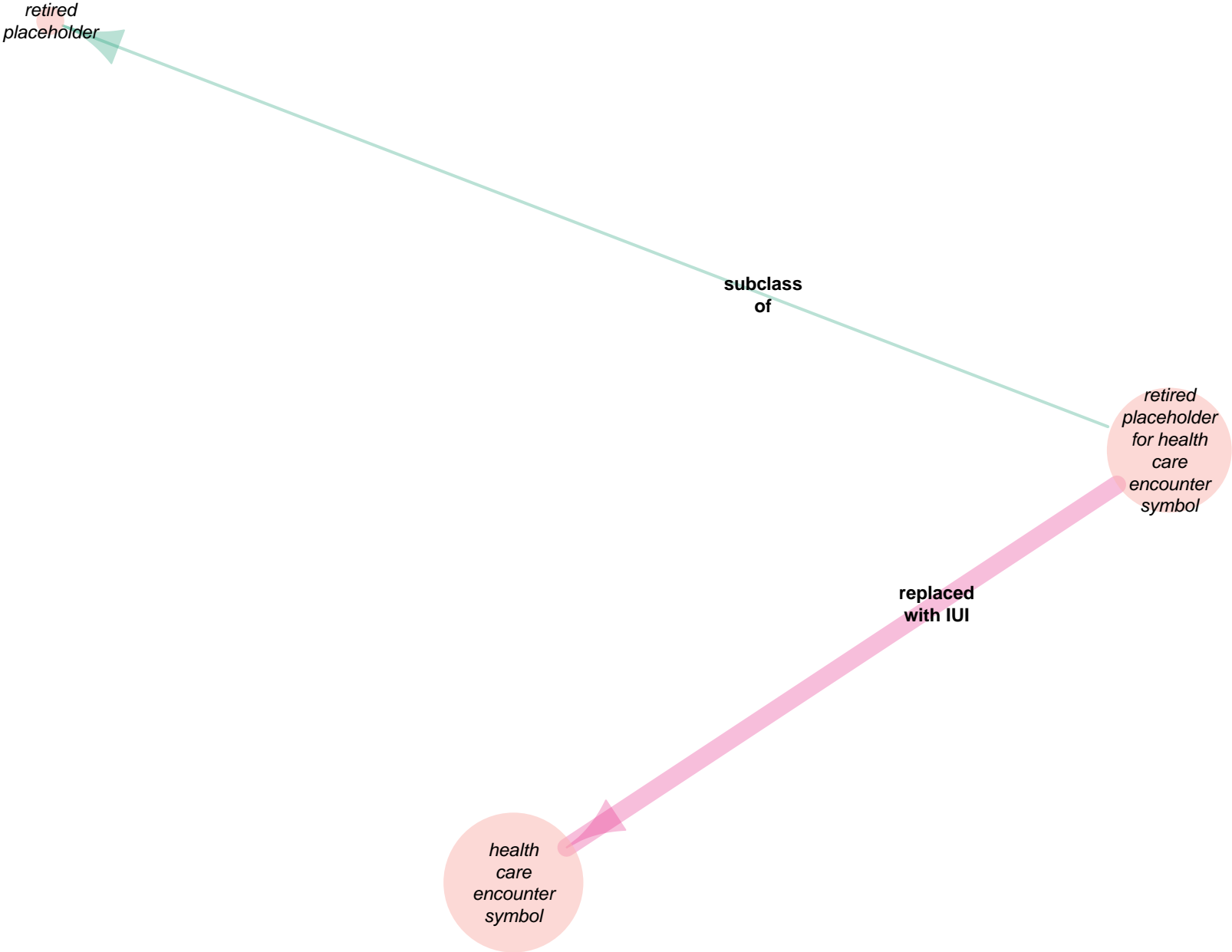
retired placeholder for health care encounter registry denoter (http://transformunify.org/ontologies/TURBO_0000910)
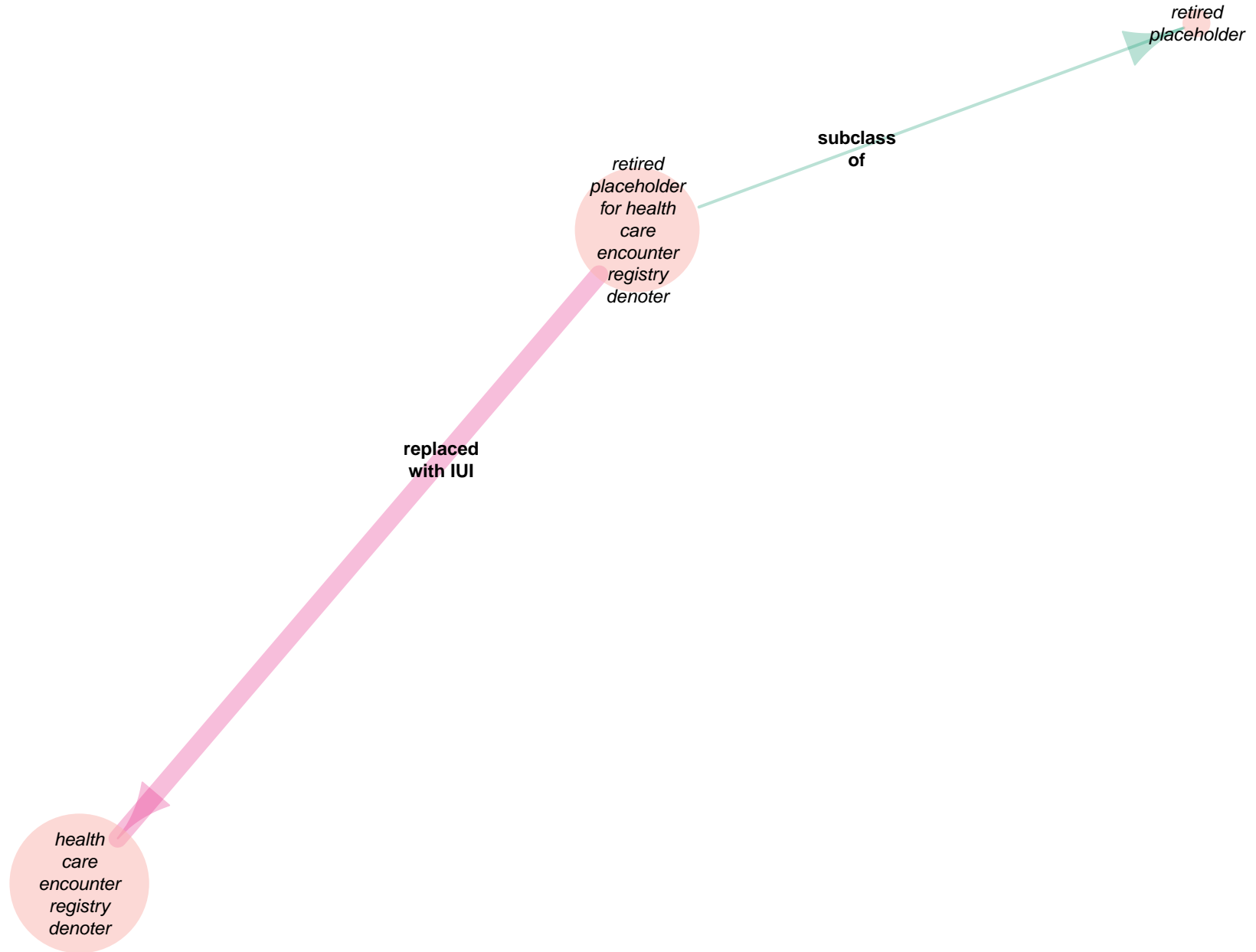
retired placeholder

retired placeholder for health care encounter registry denoter

subclass of

replaced with IUI

health care encounter registry denoter

retired placeholder for health care encounter start (http://transformunify.org/ontologies/TURBO_0000911)

retired placeholder for health care encounter start date (http://transformunify.org/ontologies/TURBO_0000912)
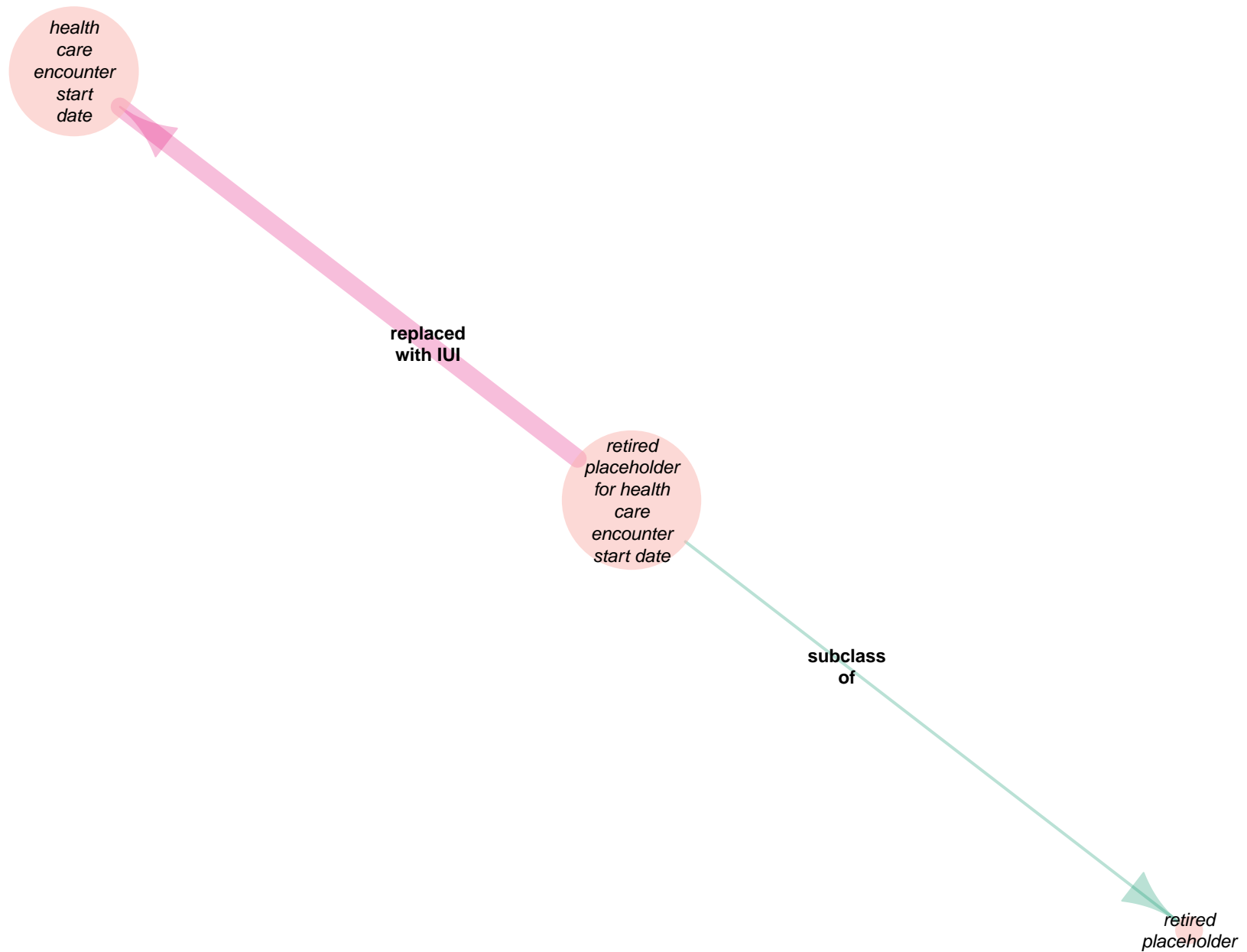
health care encounter start date

replaced with IUI

retired placeholder for health care encounter start date

subclass of

retired placeholder

retired placeholder for biobank encounter (http://transformunify.org/ontologies/TURBO_0000927)

retired placeholder for biobank encounter

replaced with IUI

biobank encounter

subclass of

retired placeholder
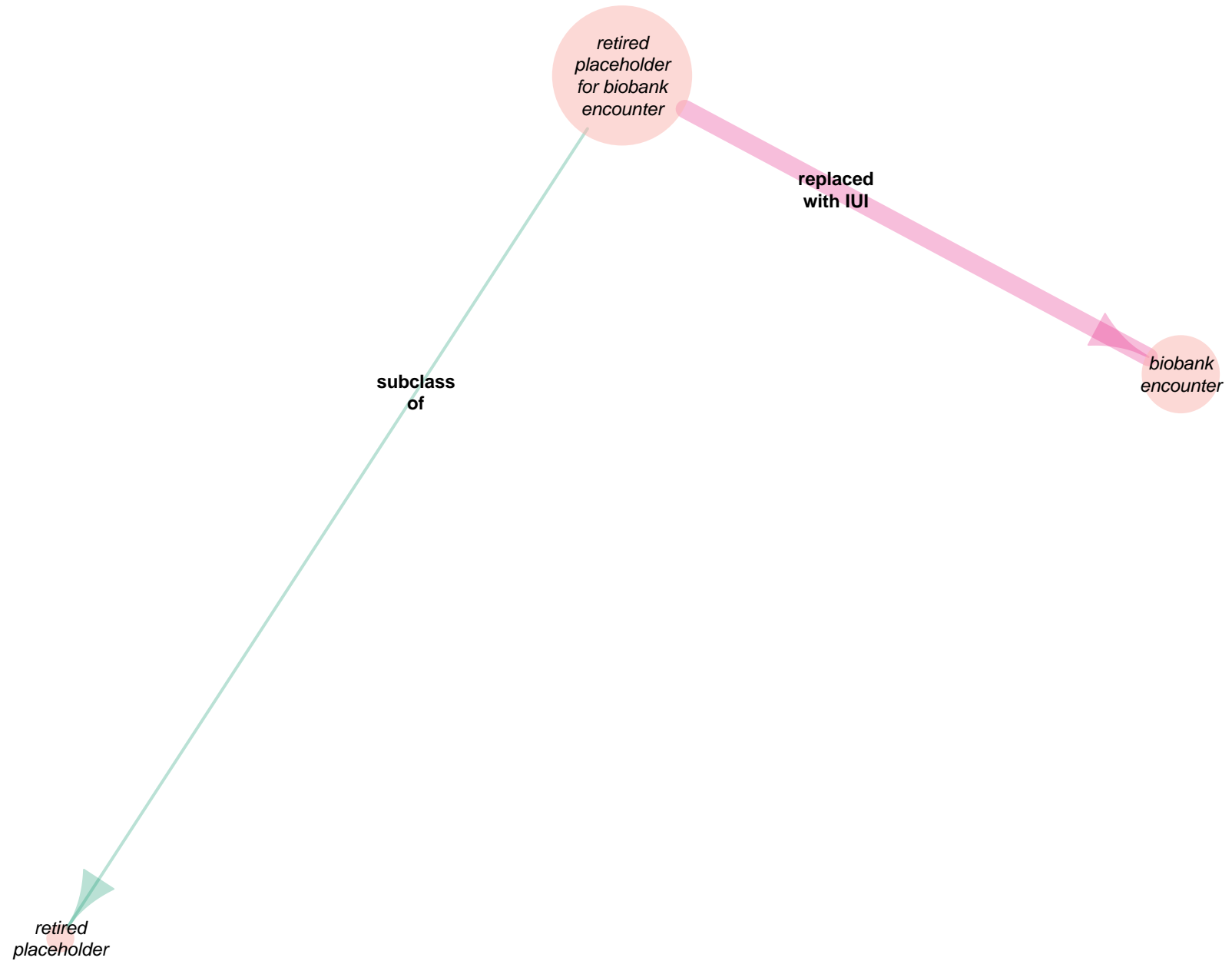
retired placeholder for biobank encounter start (http://transformunify.org/ontologies/TURBO_0000931)

retired placeholder for biobank encounter start

subclass of

replaced with IUI

retired placeholder

biobank encounter start
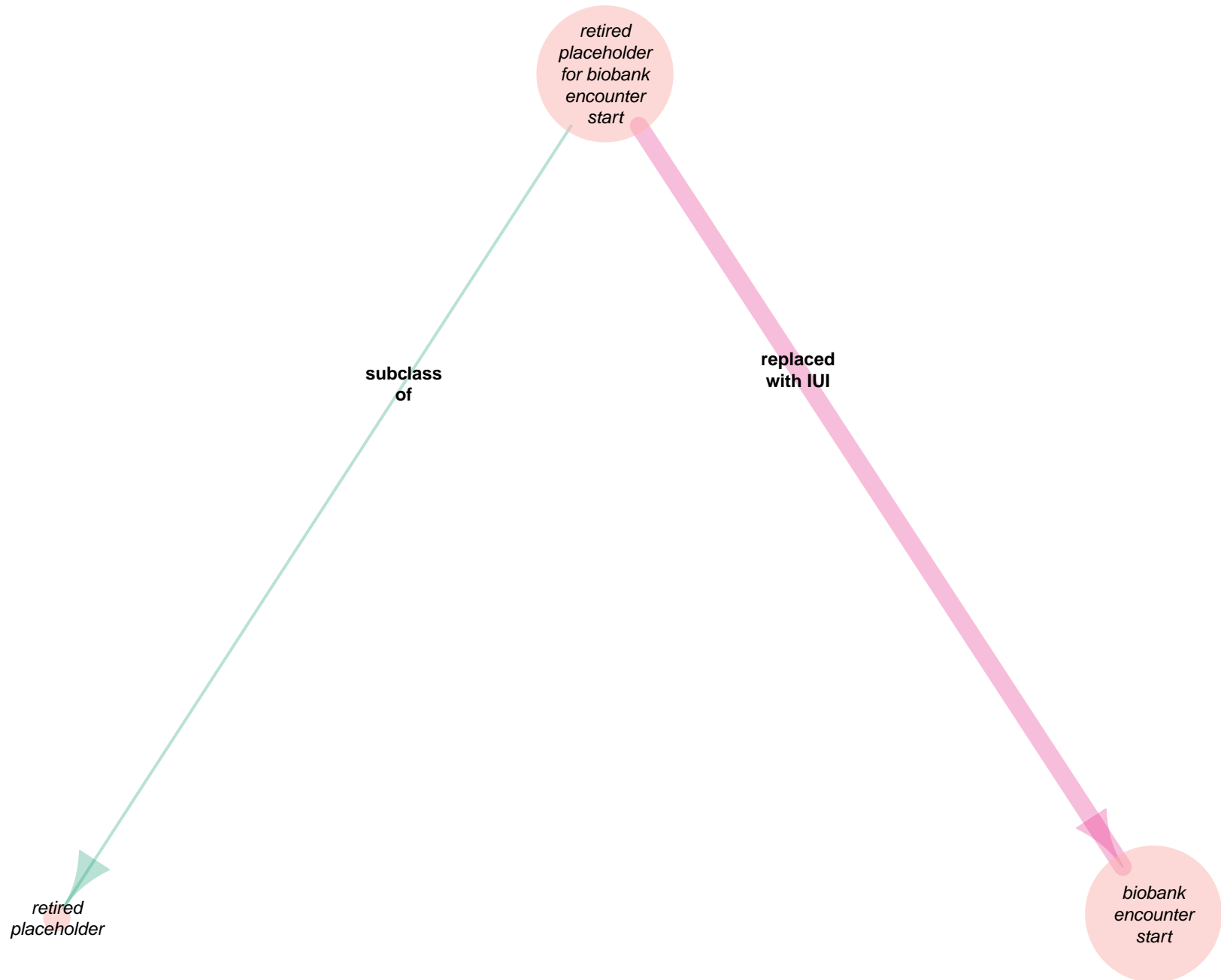
retired placeholder for biobank encounter start date (http://transformunify.org/ontologies/TURBO_0000932)
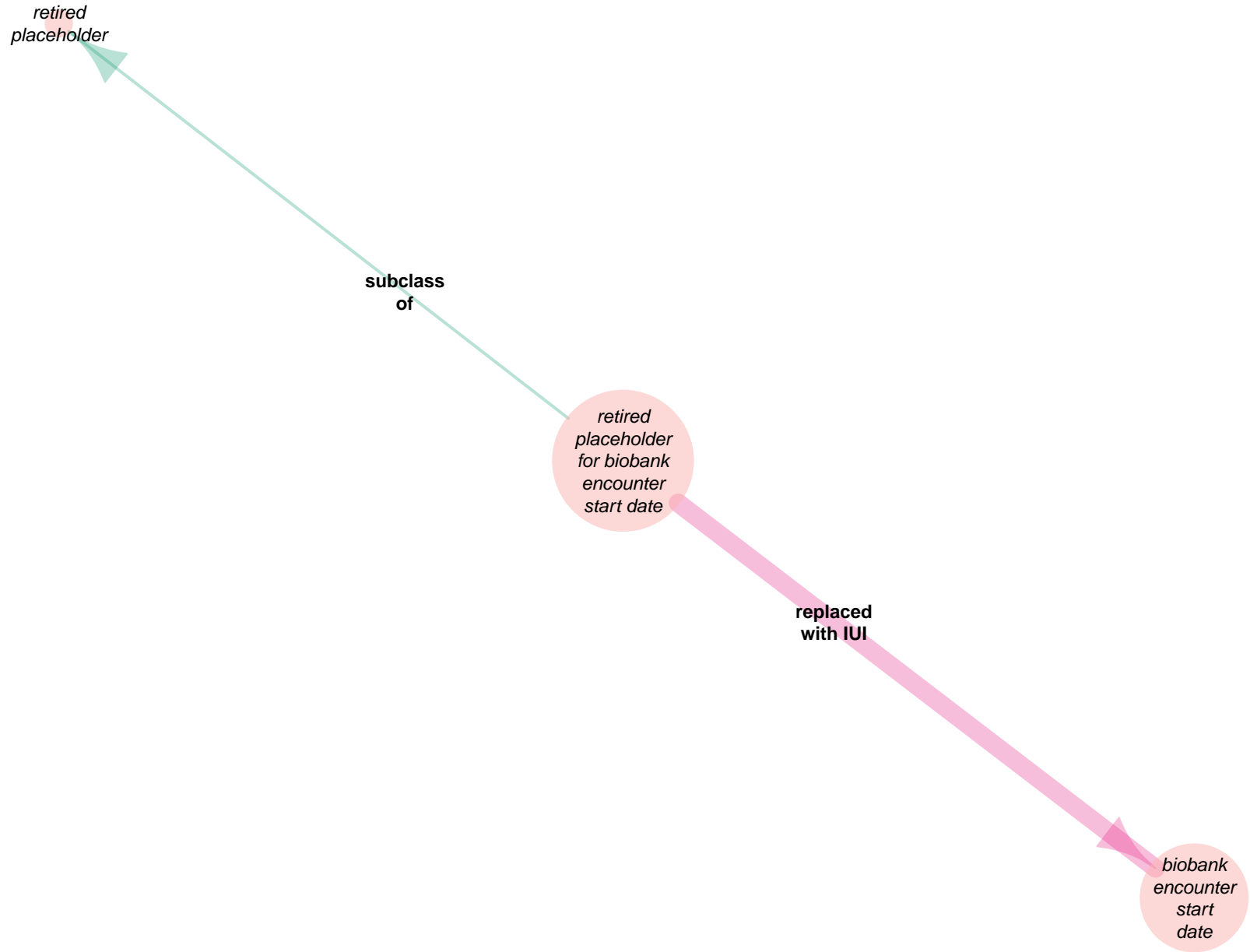
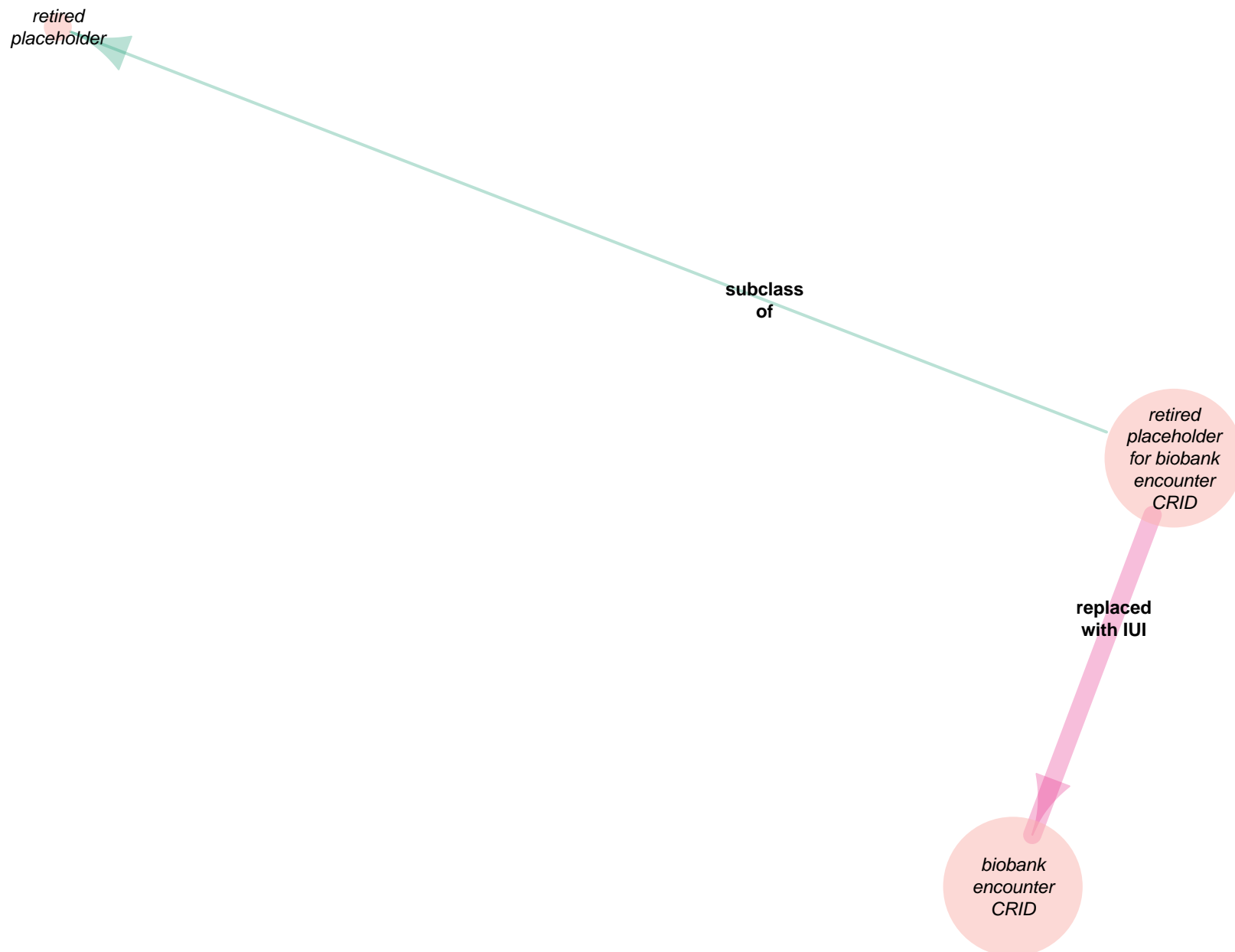*retired placeholder*

subclass of

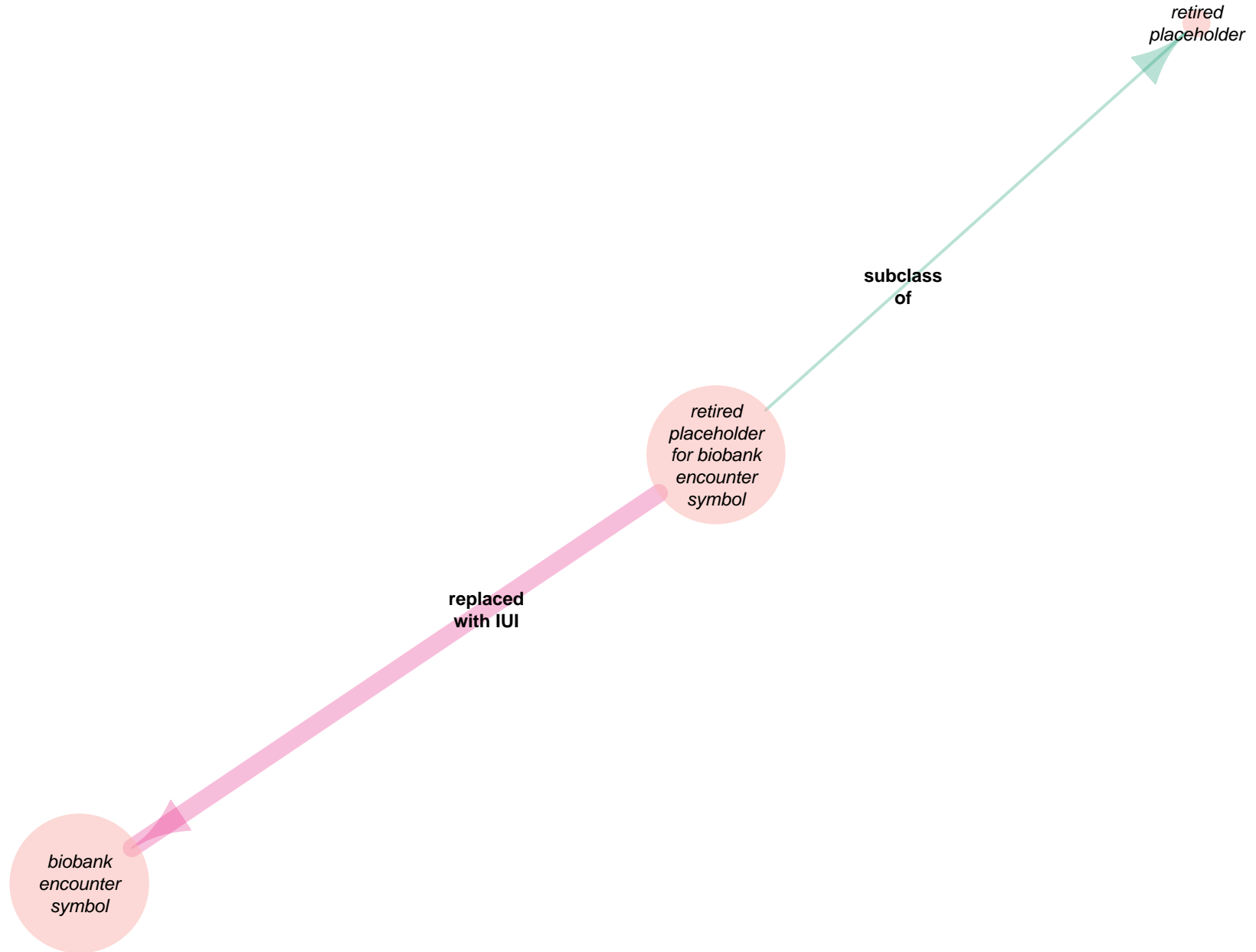*retired placeholder for biobank encounter start date*

replaced with IUI

biobank encounter start date

retired placeholder for biobank encounter CRID (http://transformunify.org/ontologies/TURBO_0000933)

retired placeholder

subclass of

retired placeholder for biobank encounter CRID

replaced with IUI

biobank encounter CRID

retired placeholder for biobank encounter symbol (http://transformunify.org/ontologies/TURBO_0000934)

retired placeholder

subclass of

retired placeholder for biobank encounter symbol

replaced with IUI

biobank encounter symbol

retired placeholder for biobank encounter registry denoter (http://transformunify.org/ontologies/TURBO_0000935)
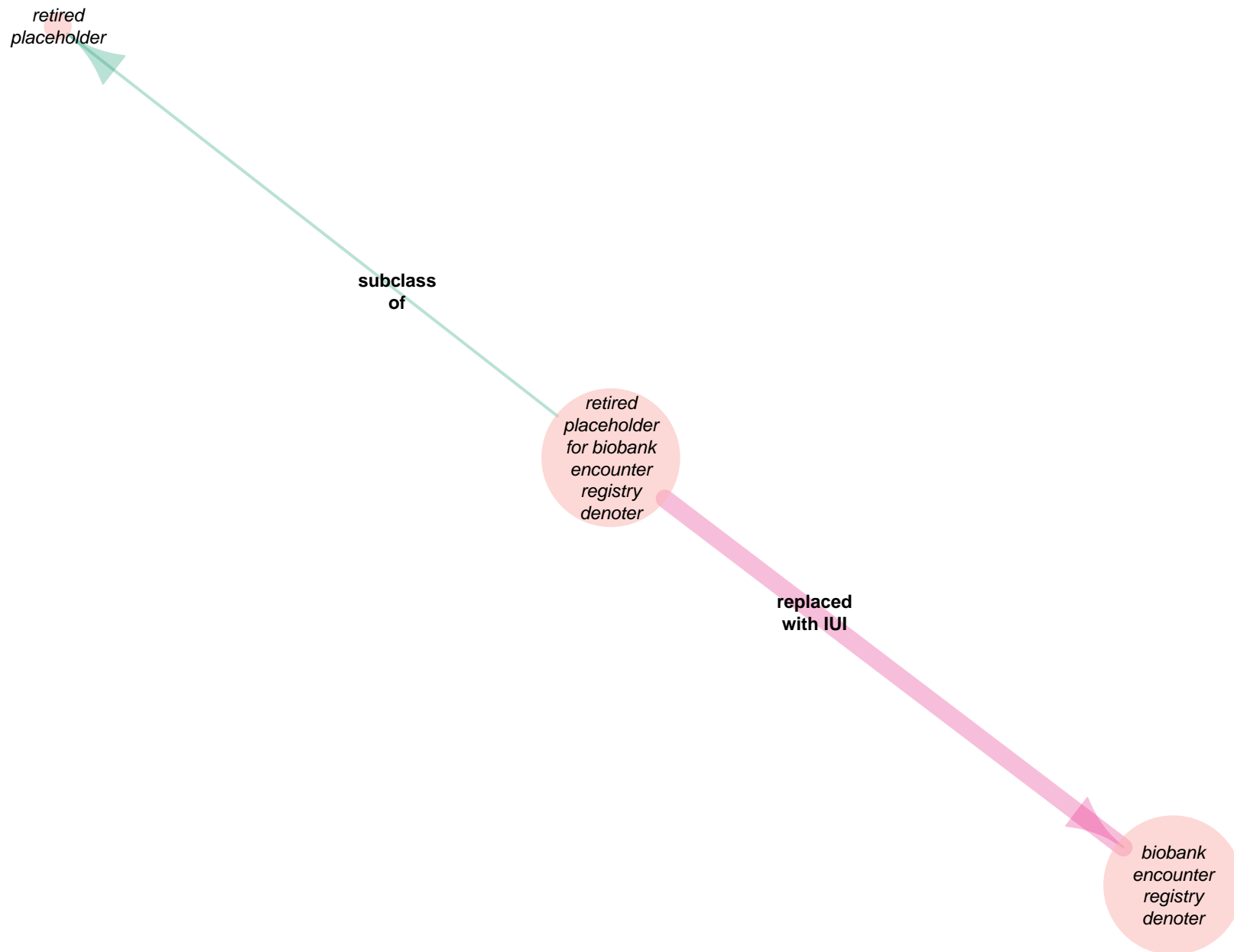
retired placeholder

subclass of

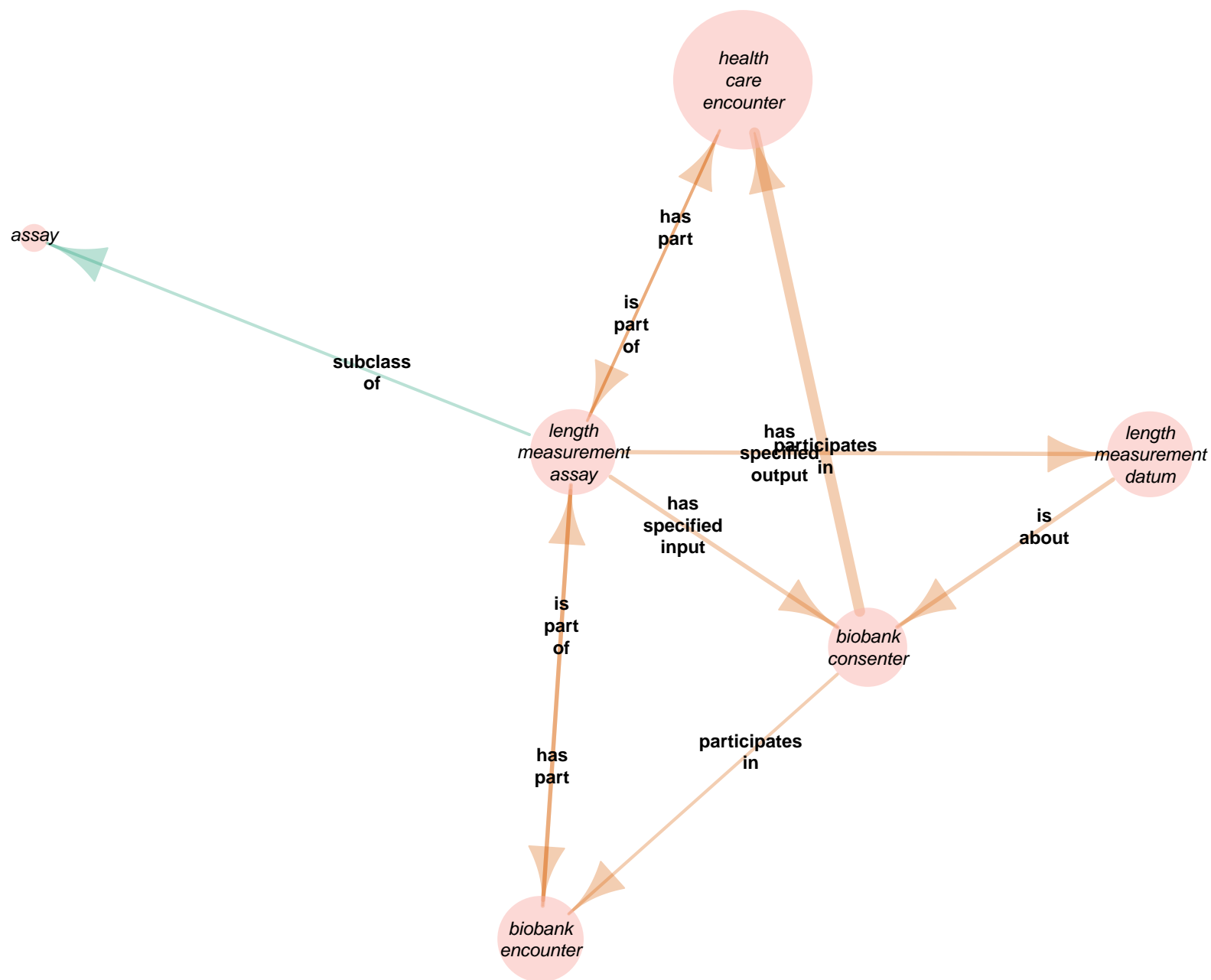*retired placeholder for biobank encounter registry denoter*

replaced with IUI
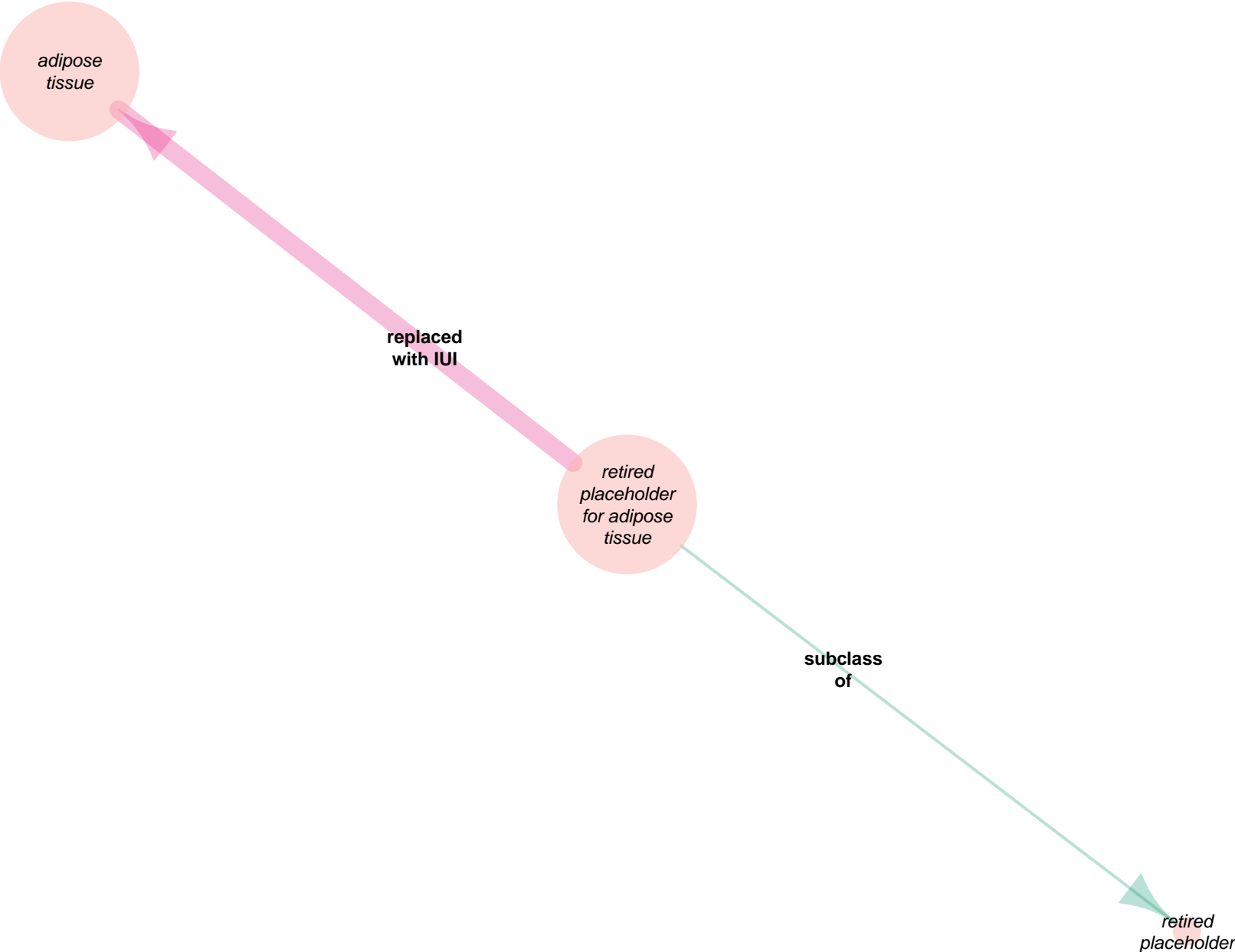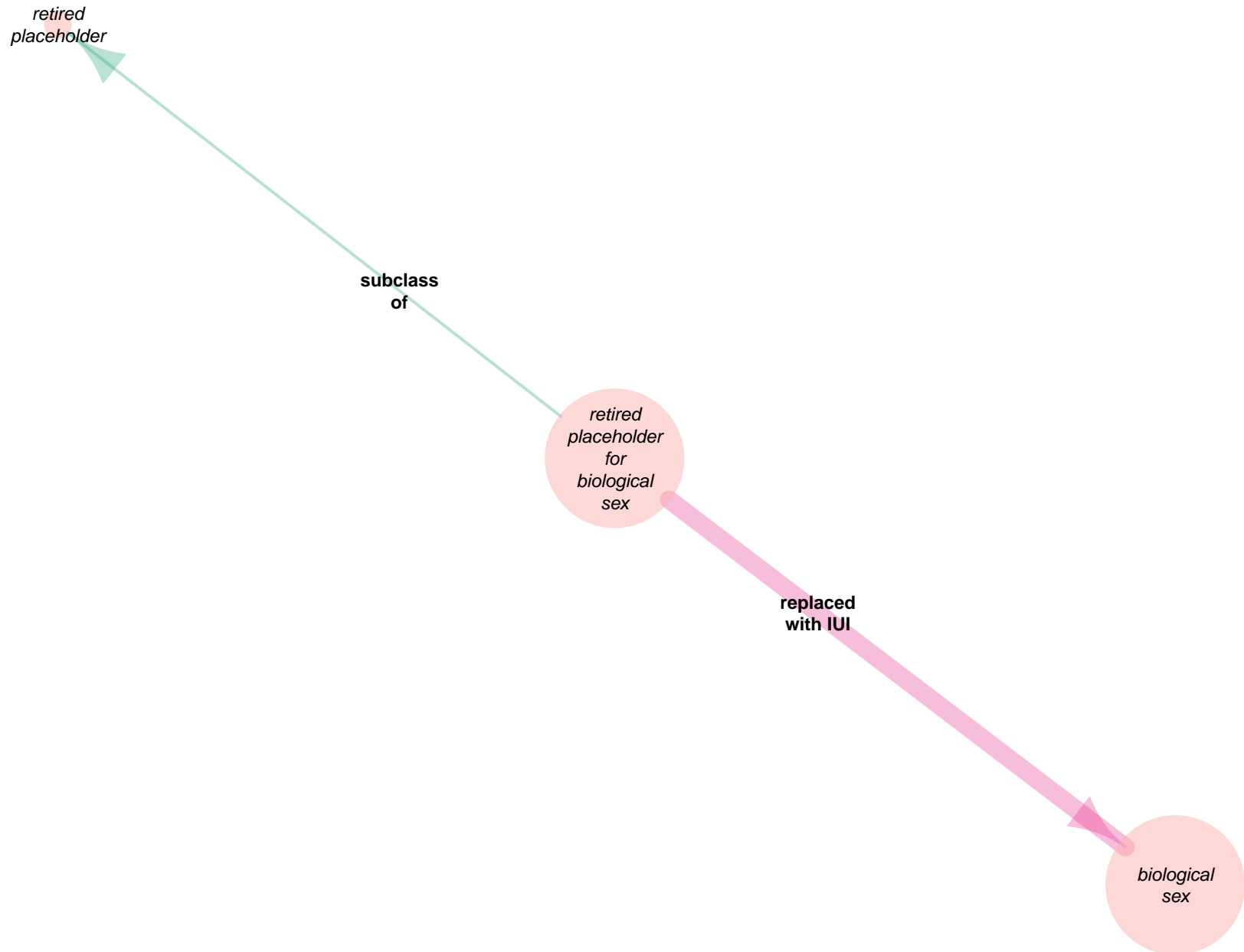
biobank encounter registry denoter

length measurement assay (http://transformunify.org/ontologies/TURBO_0001511)

retired placeholder for adipose tissue (http://transformunify.org/ontologies/TURBO_0001901)

adipose tissue

replaced with IUI

retired placeholder for adipose tissue

subclass of

retired placeholder

retired placeholder for biological sex (http://transformunify.org/ontologies/TURBO_0001902)

retired placeholder

subclass of

retired placeholder for biological sex

replaced with IUI

biological sex

retired placeholder for height quality (http://transformunify.org/ontologies/TURBO_0001905)

retired
placeholder

**subclass
of**

retired
placeholder
for height
quality

**replaced
with IUI**
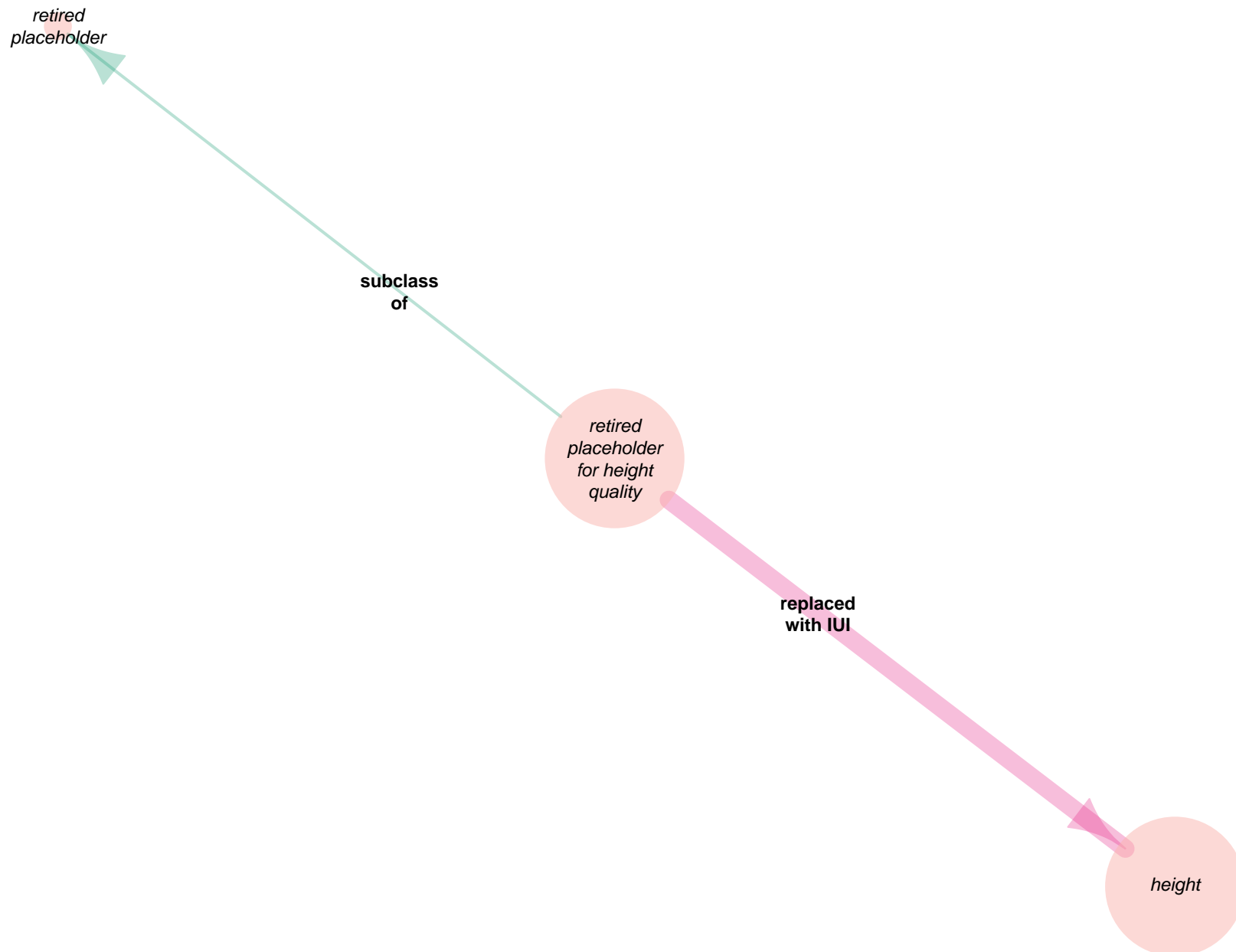
height

retired placeholder for process boundary (http://transformunify.org/ontologies/TURBO_0001906)
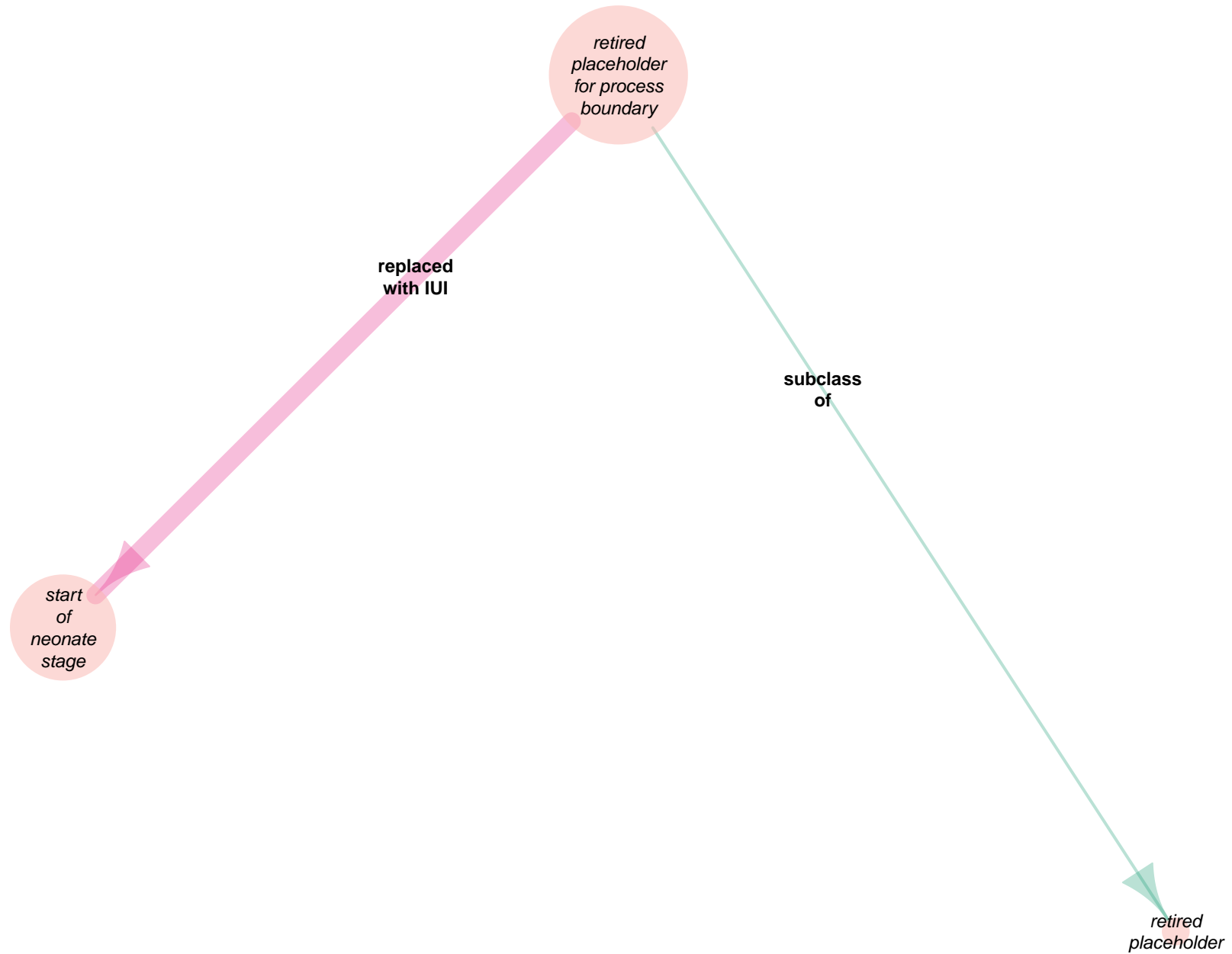
retired placeholder for weight quality (http://transformunify.org/ontologies/TURBO_0001908)

weight

replaced
with IUI

retired
placeholder
for weight
quality

subclass
of

retired
placeholder
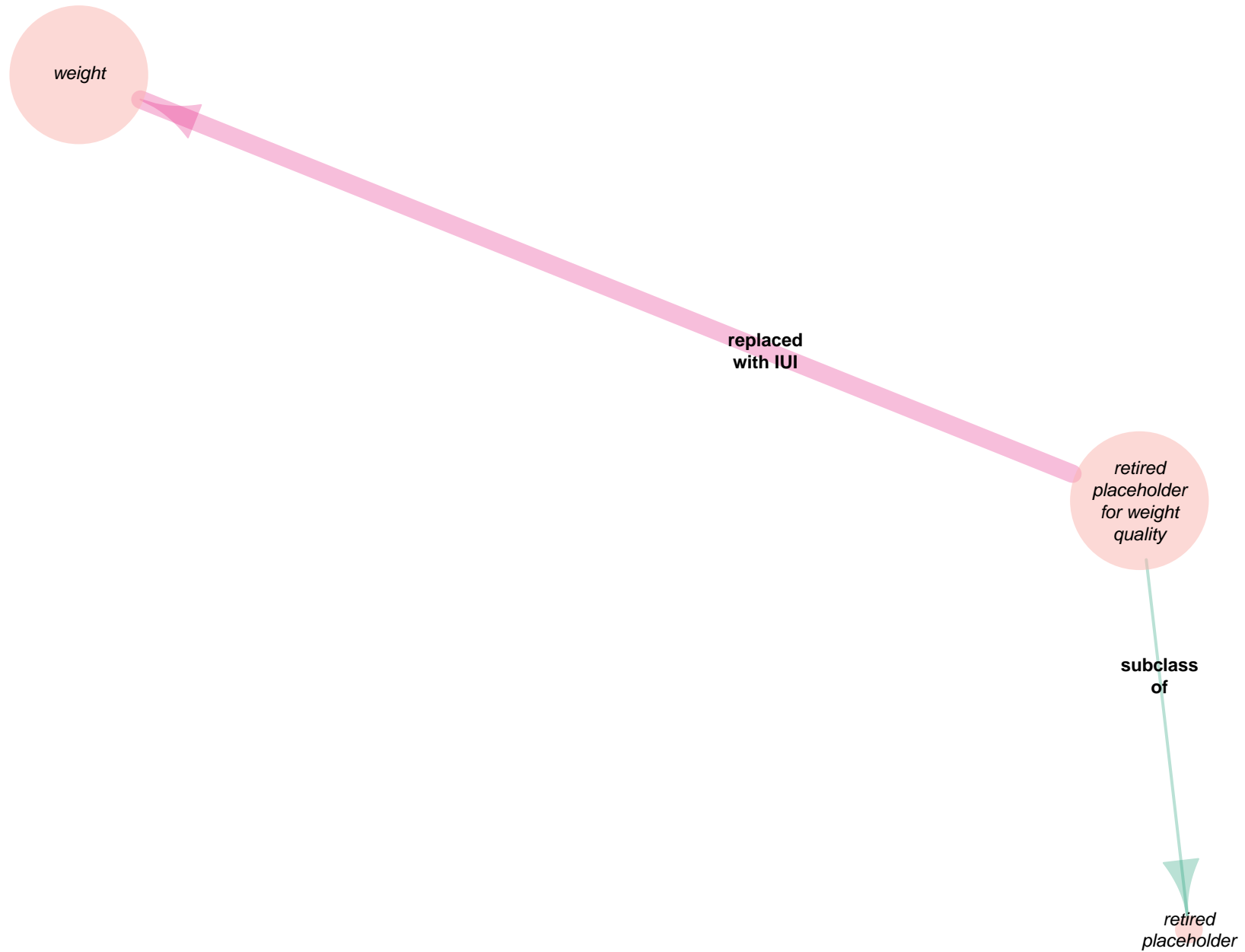
conclusionating (http://transformunify.org/ontologies/TURBO_0002500)
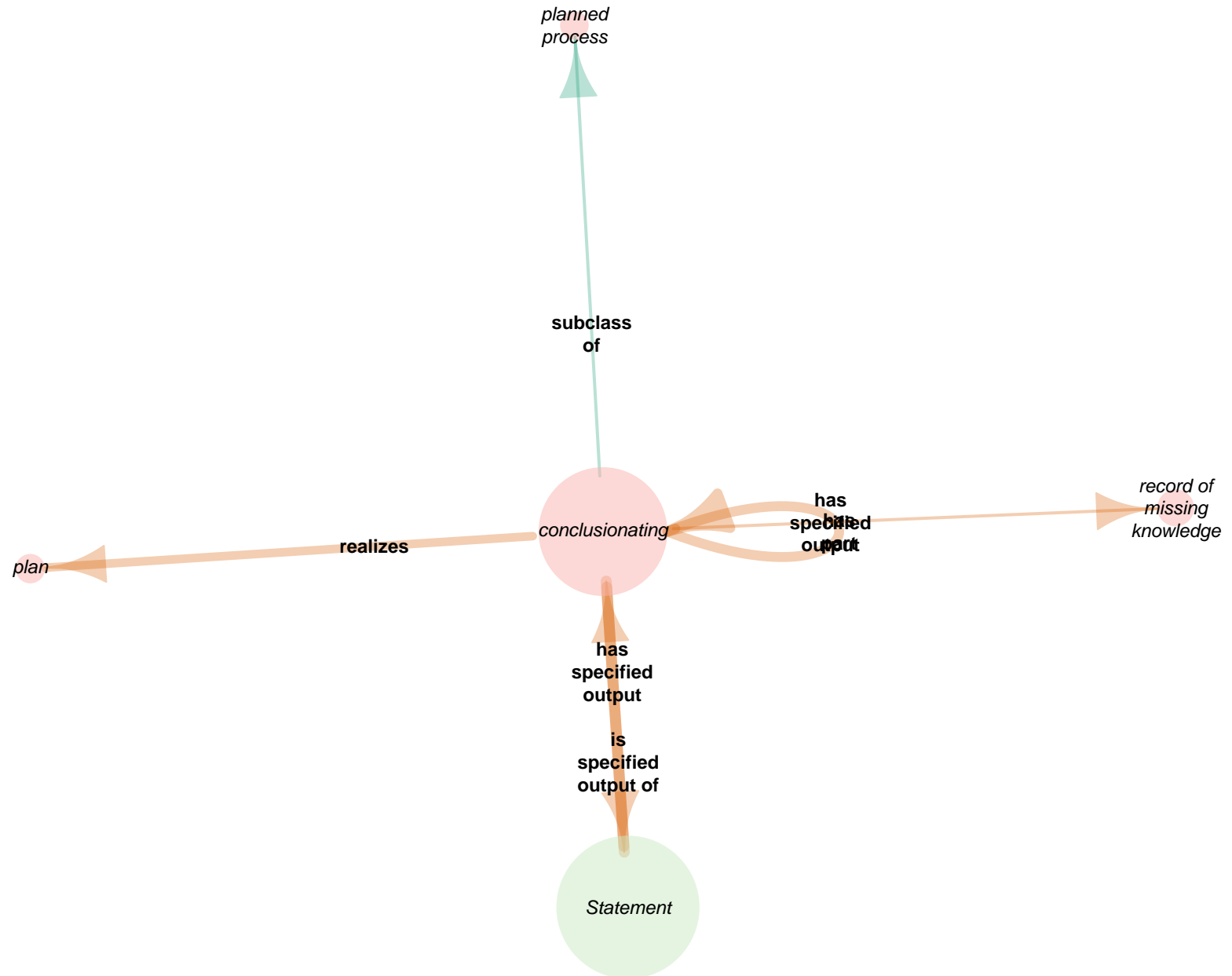
has date value (http://transformunify.org/ontologies/TURBO_0006511)
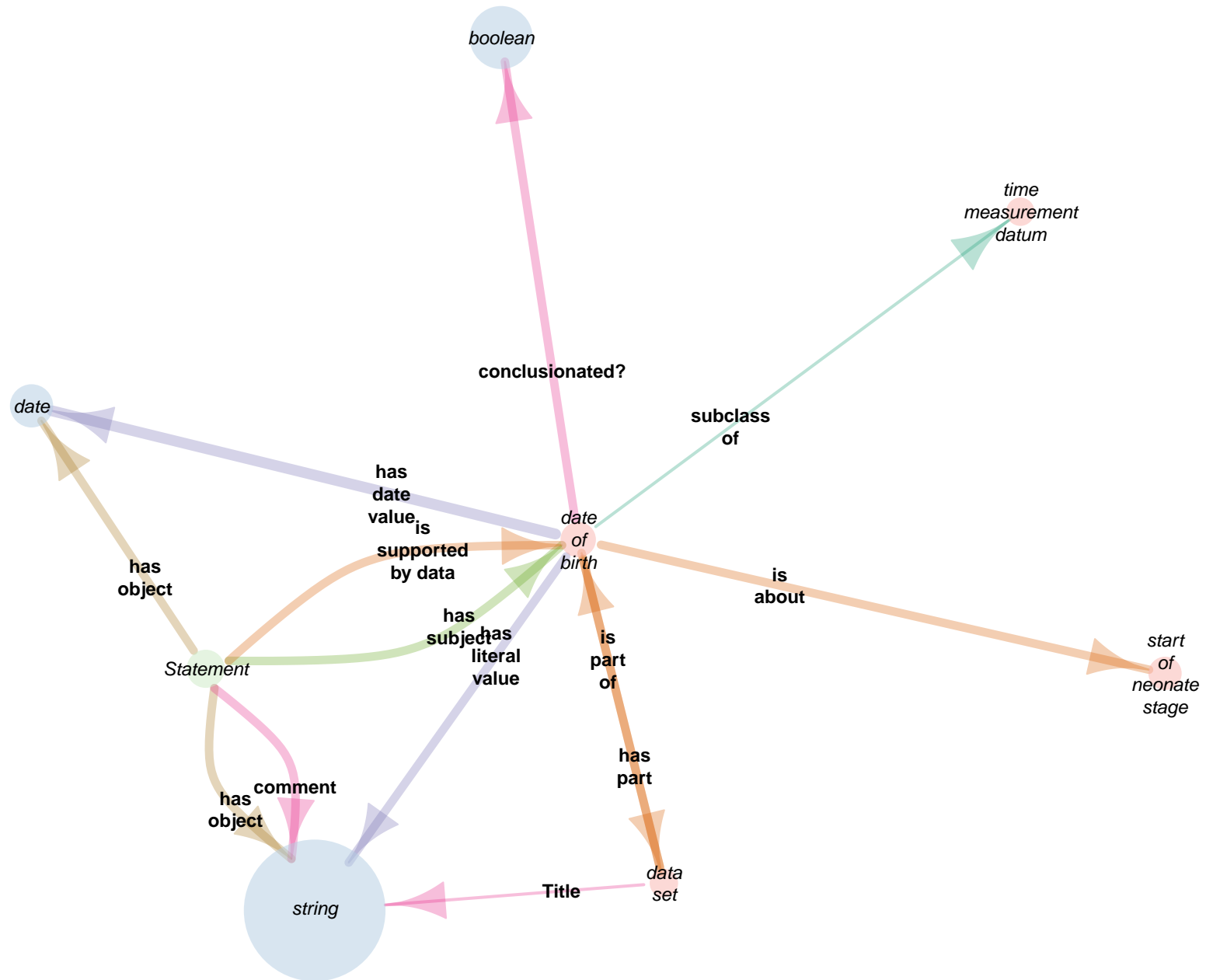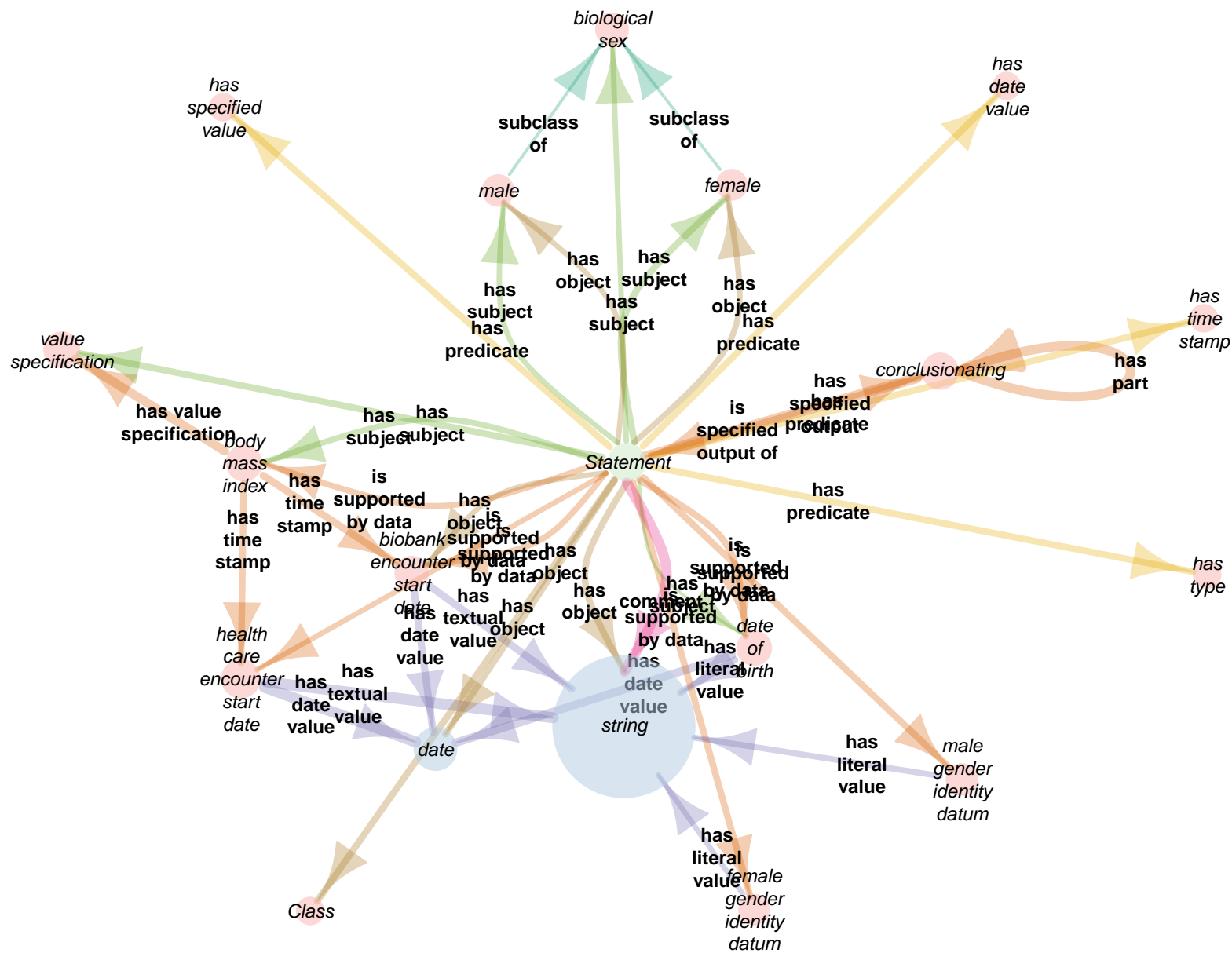
has
date
value

has
predicate
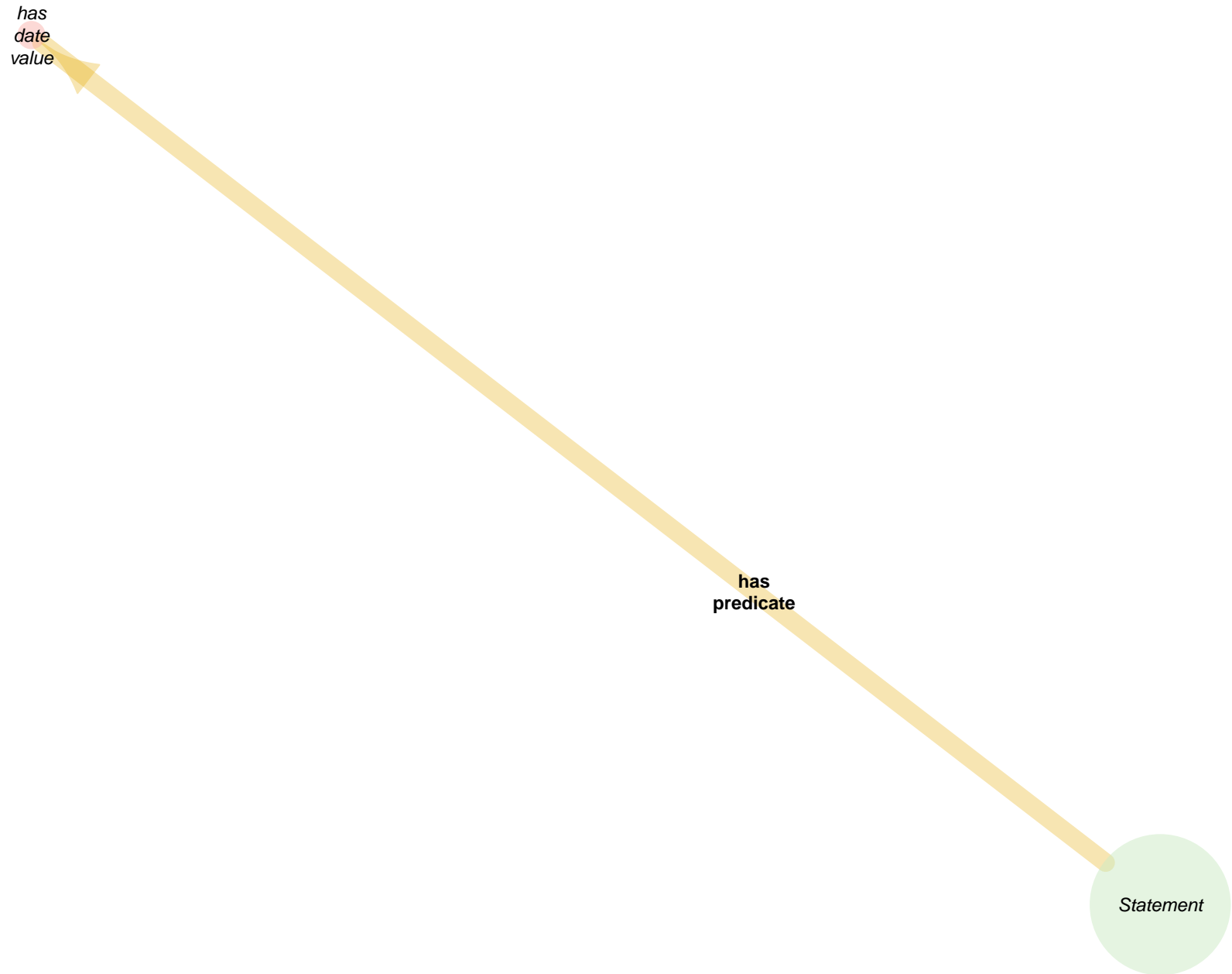
Statement

body mass index (http://www.ebi.ac.uk/efo/EFO_0004340)
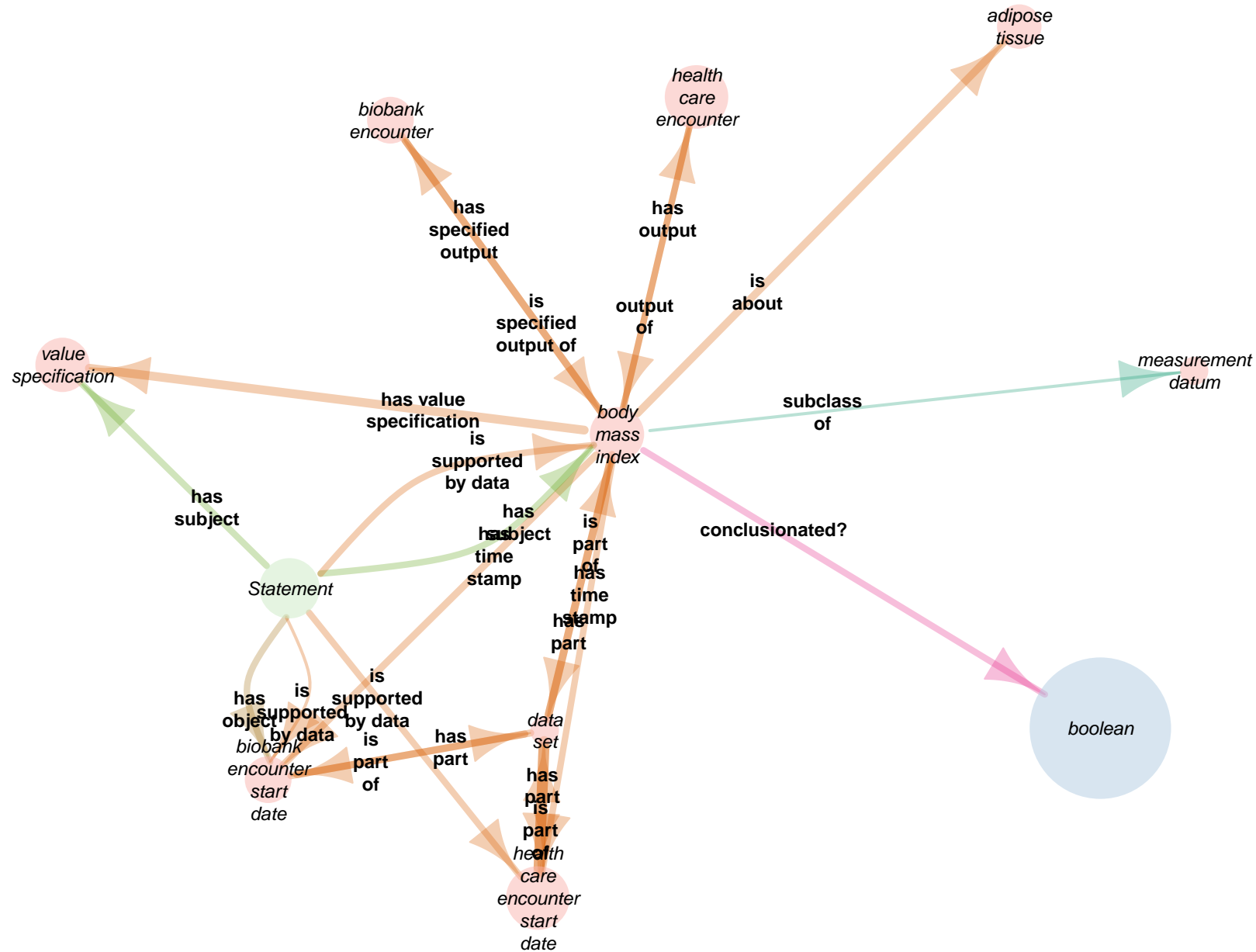
date of birth (http://www.ebi.ac.uk/efo/EFO_0004950)

Statement (http://www.w3.org/1999/02/22-rdf-syntax-ns#Statement)

has type (http://www.w3.org/1999/02/22−rdf−syntax−ns#type)

has type

has predicate

Statement

URI (http://www.w3.org/2001/XMLSchema#anyURI)

health
care
encounter
registry
denoter

has
literal
value

URI

boolean (http://www.w3.org/2001/XMLSchema#boolean)

date
of
birth

conclusionated?

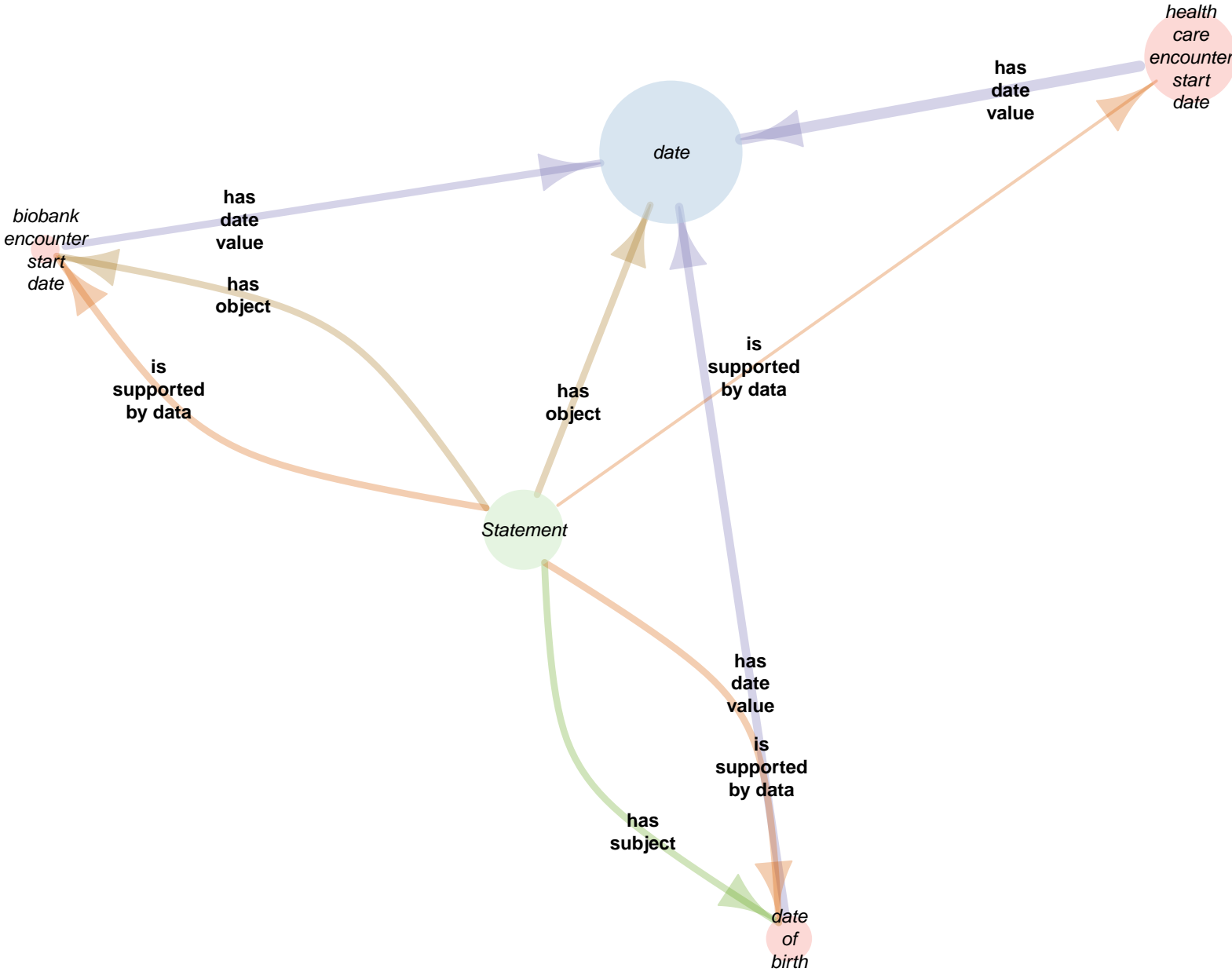male **conclusionated?** boolean **conclusionated?** female

conclusionated?

body
mass
index
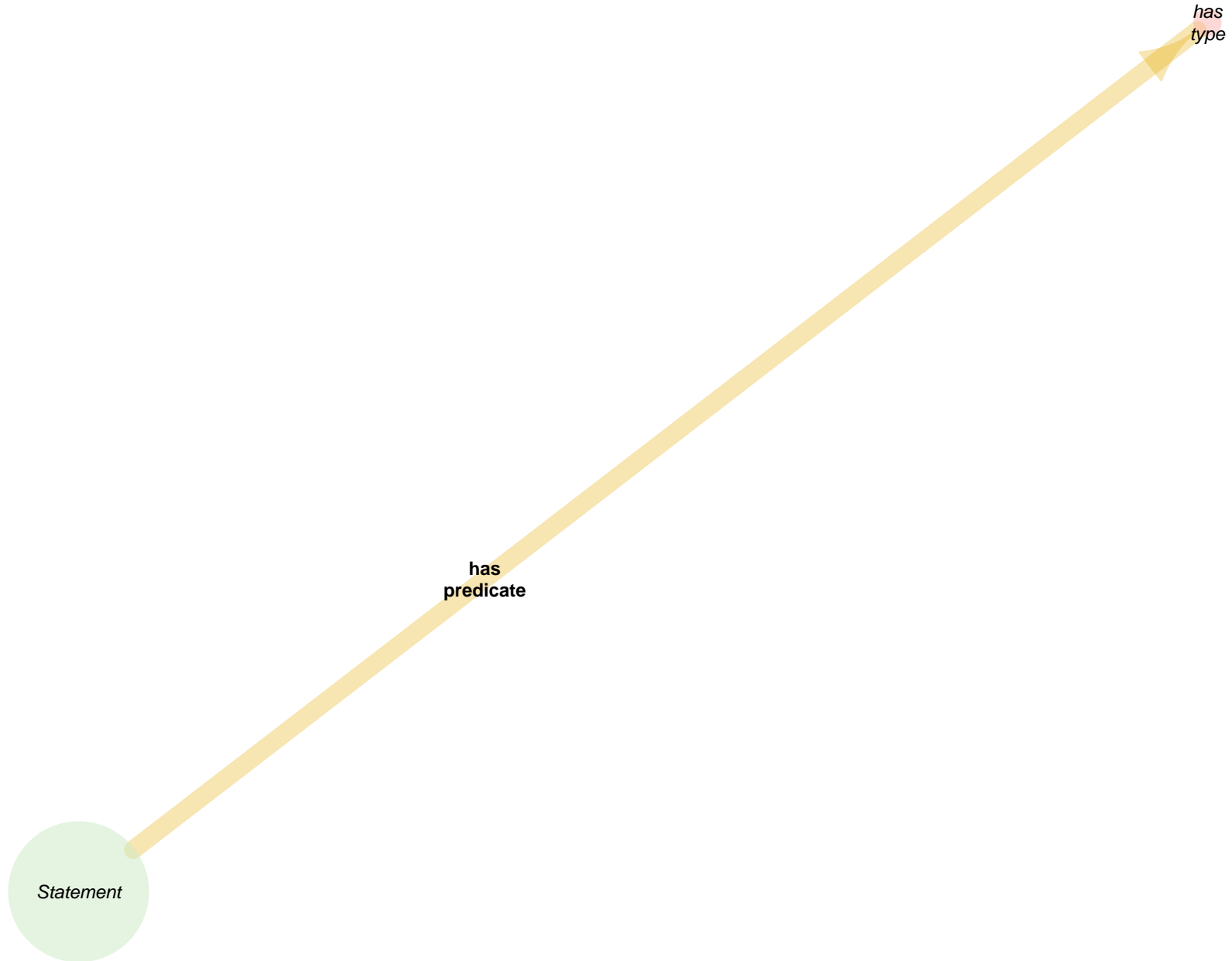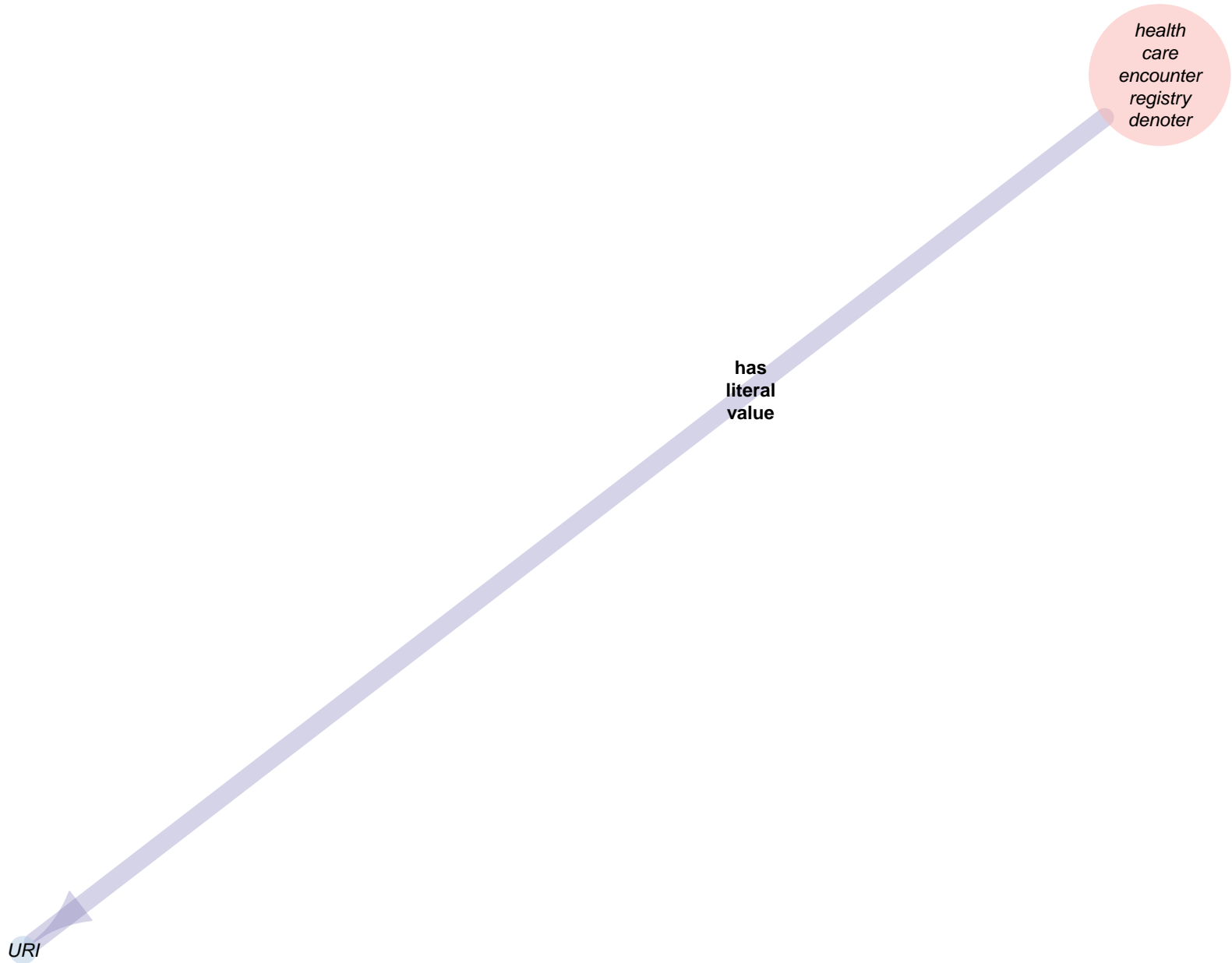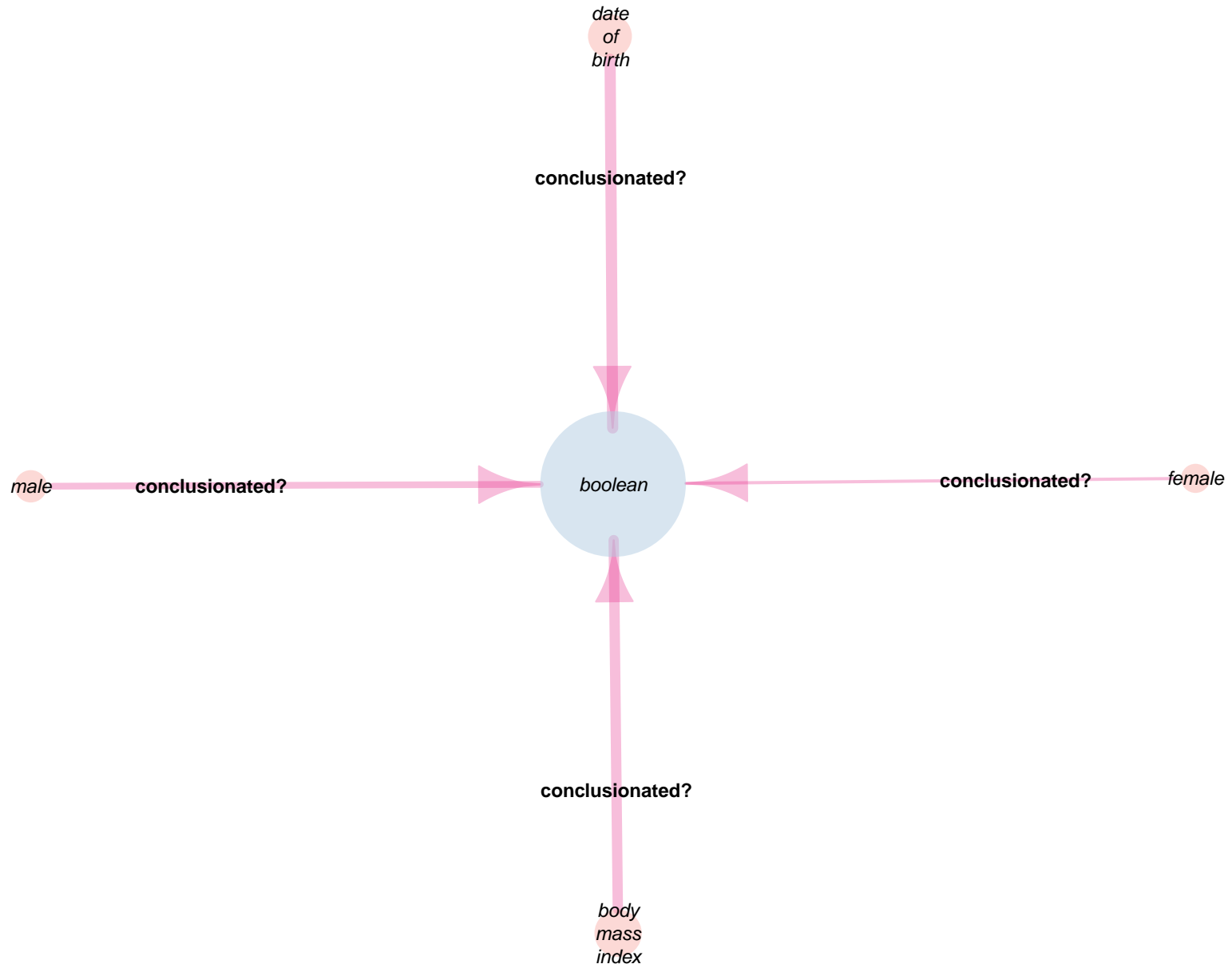
date (http://www.w3.org/2001/XMLSchema#date)

float (http://www.w3.org/2001/XMLSchema#float)
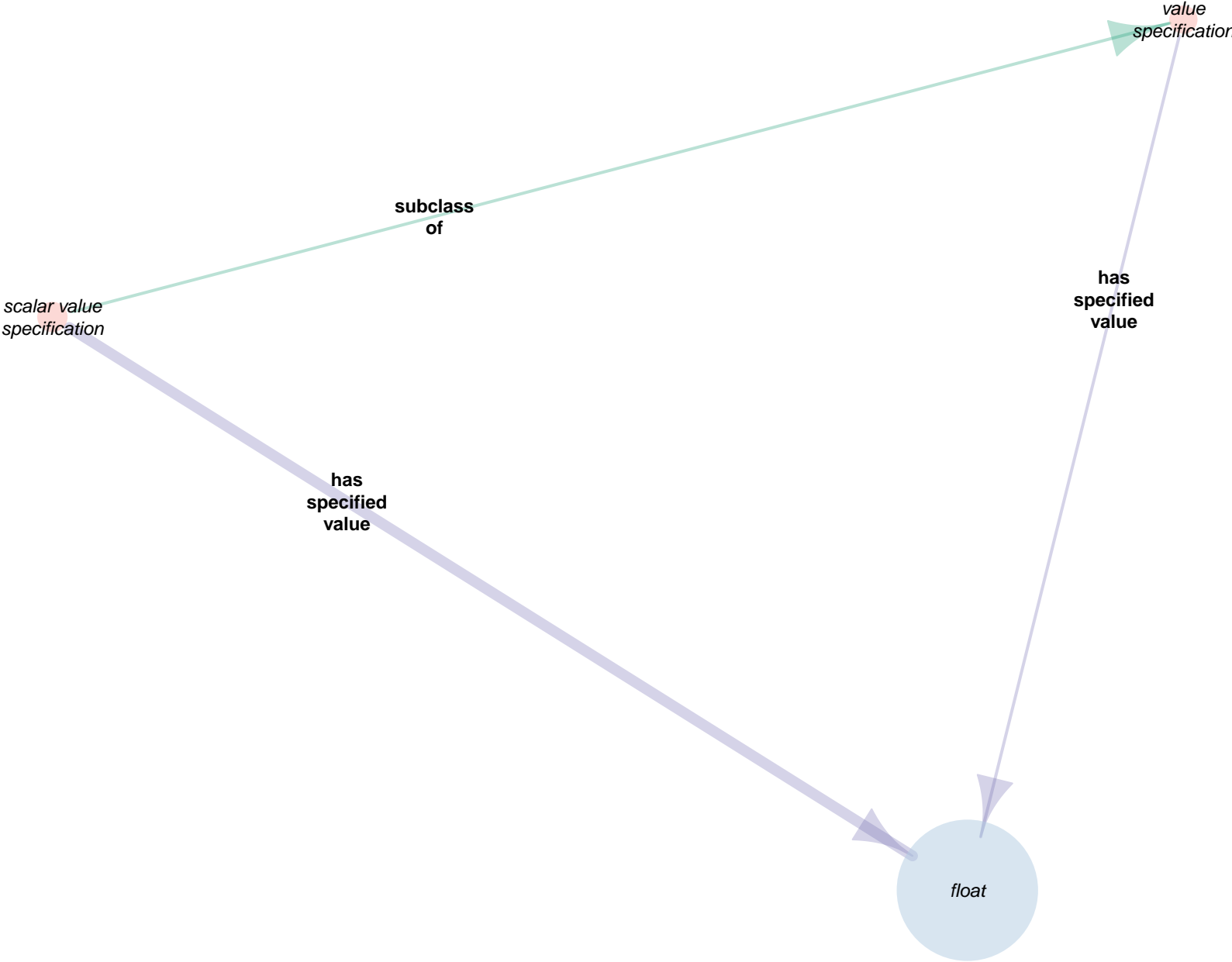
real (http://www.w3.org/2001/XMLSchema#real)
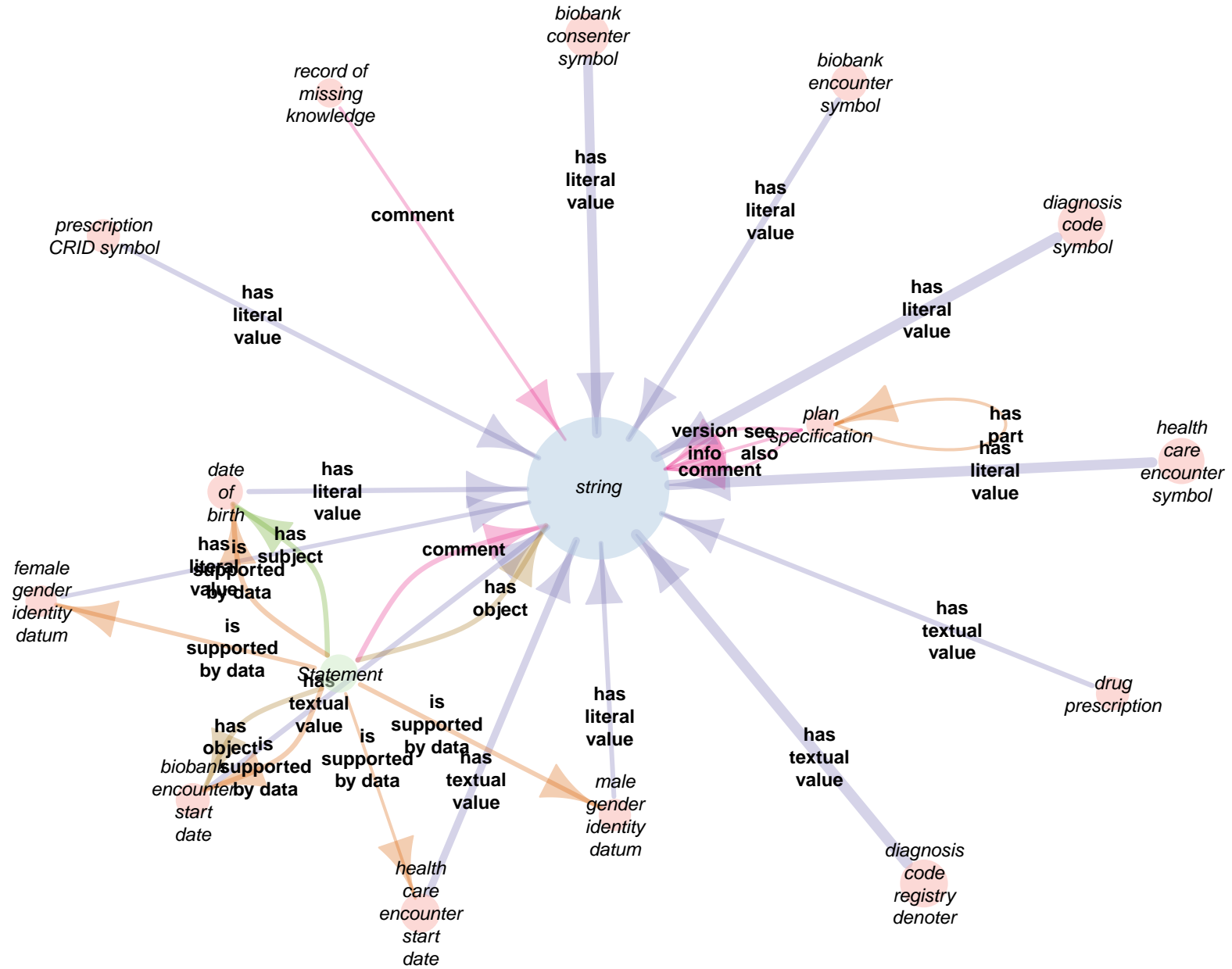
real

has
specified
numeric
value

value
specification

string (http://www.w3.org/2001/XMLSchema#string)
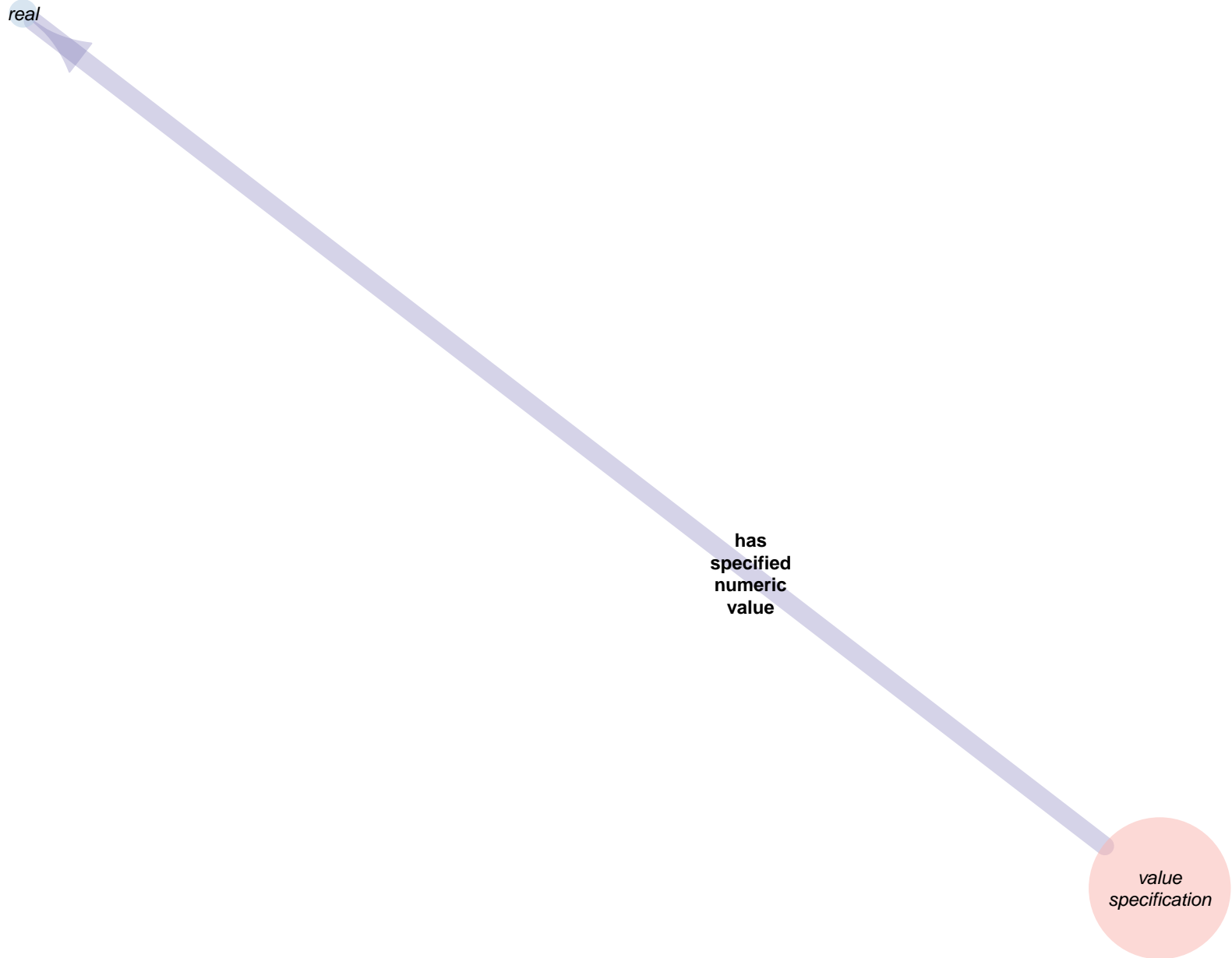
Class (http://www.w3.org/2002/07/owl#Class)

Class

has
object

Statement