

# **omopcept** : an R package to query and visualise OMOP concept relationships

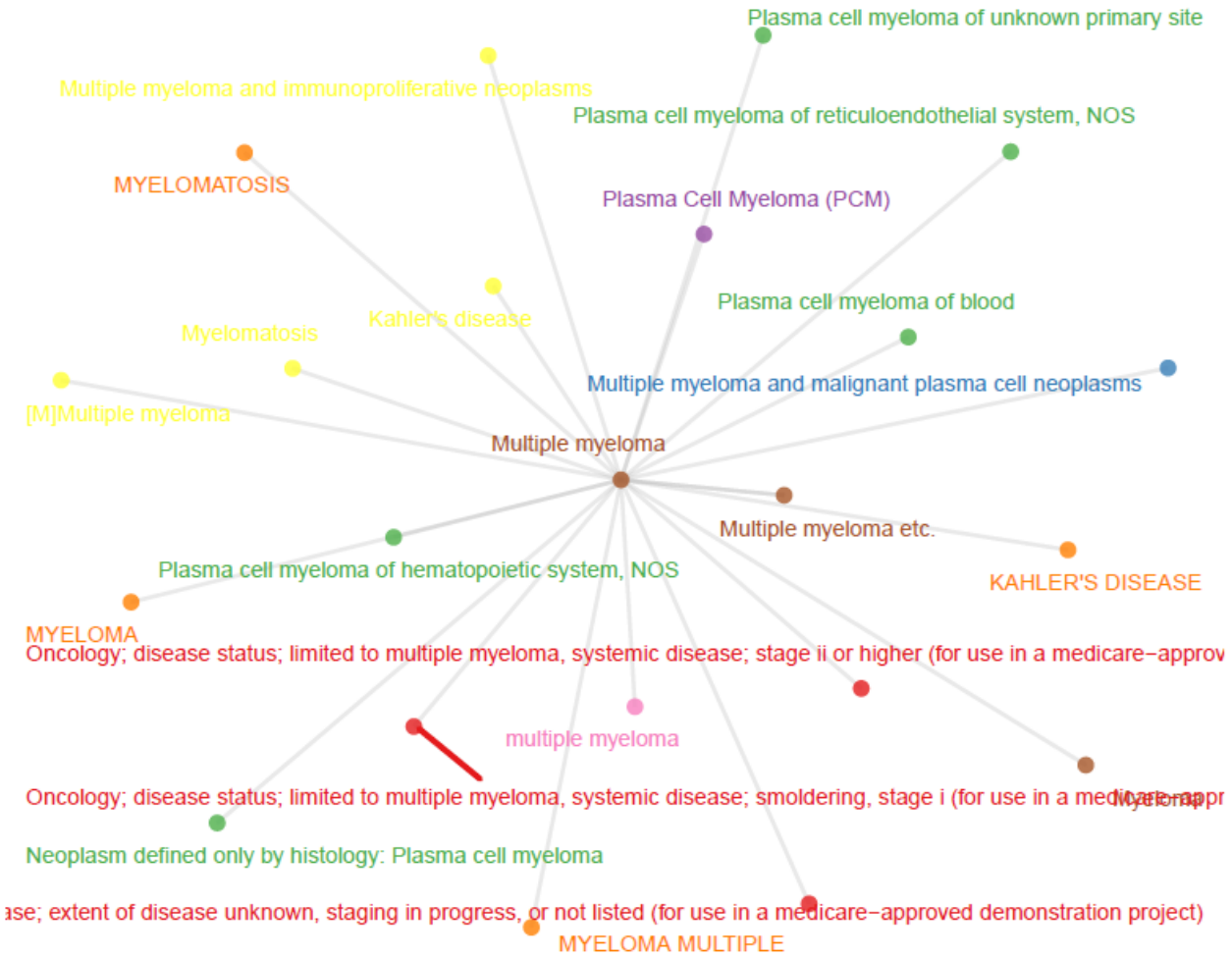
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<https://github.com/SAFEHR-data/omopcept>

**omop concepts** (less cons)

OMOP vocabs : > 10 million concepts of 130 vocabs  
> 38 million relationships of 400 types

# relationship\_id 'Mapped from'



# R code to create plot

# 1 query a concept

```
m = omop_names("multiple myeloma",
  exact = TRUE,
  vocab = "SNOMED",
  standard = "S")
```

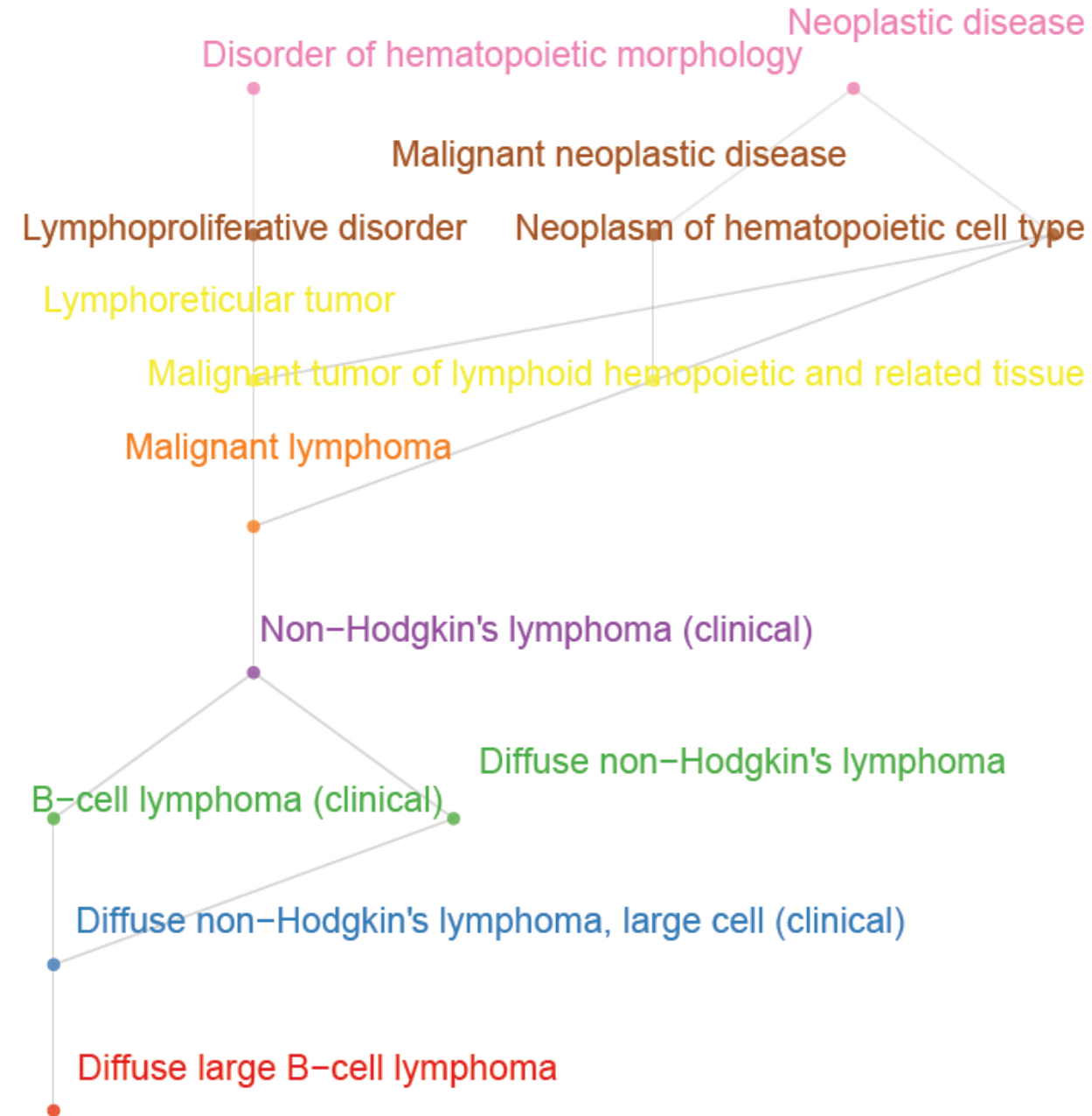
# 2 query relations

```
o = omop_relations(m$concept_id,
  relation = 'Mapped from')
```

# 3 visualise

```
omop_graph(o,
  nodecolourvar = "vocabulary_id")
```

## relationship\_id 'Is a' to go up hierarchy



# R code to create plot

# 1 query a concept

```
d = omop_names("Diffuse large B-cell lymphoma",  
exact = TRUE,  
vocab = "SNOMED")
```

# 2 query relations

```
o = omop_relations(d$concept_id,  
relation = "Is a",  
steps = 7)
```

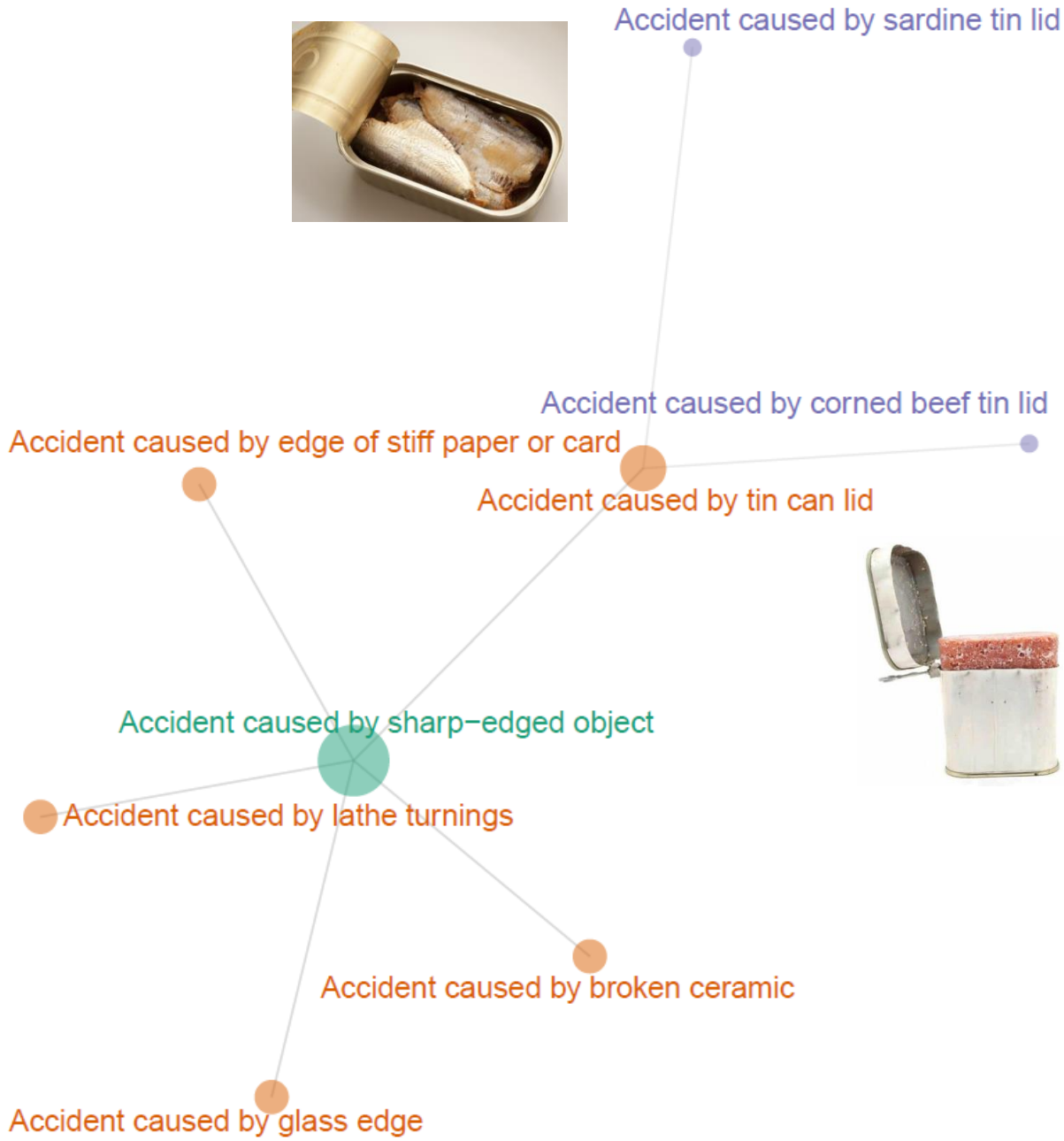
# 3 visualise

```
omop_graph(o,  
gglayout = "tree",  
nodecolourvar = "steps")
```

# relationship\_id 'Subsumes' to go down a hierarchy



Accident caused by sardine tin lid



# R code to create plot

# 1 query a concept

```
s = omop_names("Accident caused by sharp-edged object", standard="S")
```

# 2 query relations

```
o = omop_relations(s$concept_id, relation = 'Subsumes', steps = 2)
```

# 3 visualise

```
omop_graph(o, nodecolourvar = "steps")
```

# UCLH OMOP-ES Extraction System



Electronic  
Health  
Record  
(EPIC)



OMOP  
Common  
Data  
Model

default format for providing  
data to researchers in UCLH

Modular, automated & reproducible  
Information governance settings can be modified & approved  
Tests and reports quality of standardisation  
Accumulating functionality with each project  
In use at UCLH, Cambridge, Exeter, Manchester

