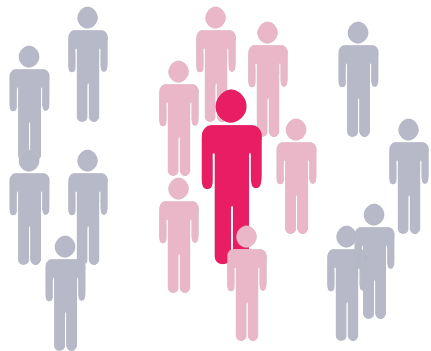


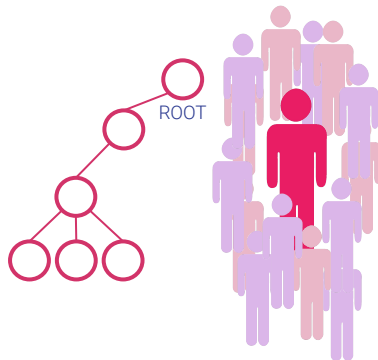
## Selecting neighbors in the dataset

**Doctor XAI** uses an **ontological distance** to find the closest  $k$  semantically-similar neighbors of the patient whose diagnosis we want to explain in the dataset.



## Generating synthetic neighbors

**Doctor XAI** generates a set of synthetic neighbors patients **exploiting the ontology** (masking similar conditions) and **keeping the sequential information**.



## Train a DT and extract an explanation

**Doctor XAI** train a **multi-label** decision tree on the synthetic neighborhood and extract an explanation from it.

