



prosperdxTM

A Digital Health Platform
for
Precision Care



The Causal Inference Difference

Machine Learning

- Can only find associations between a treatment and an outcome under specific set of circumstances
- Machine learning can only predict based on past patterns if they don't change.
- Can't be applied to other situations
- Machine algorithms reinforce treatment patterns that perpetuate inequality.

Causal Inference

- Maps all the different causal pathways to an outcome of interest and show how different variables relate to each other.
- Causal models allow us to respond to situations we haven't seen before and think about counterfactuals.
- Apply insights from one treatment setting or patient to many others.
- Identifying the direct causes of unequal outcomes



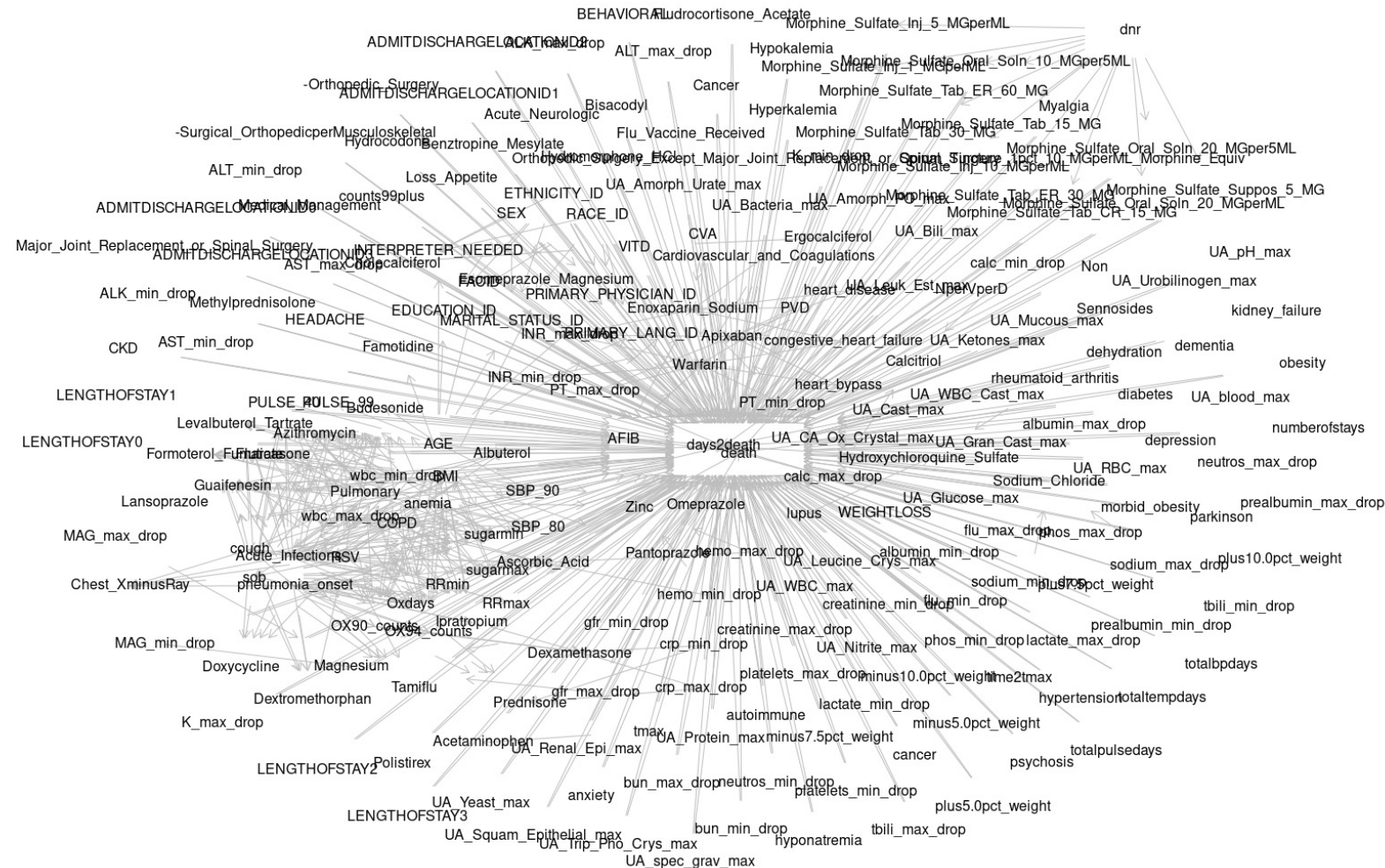
- Big data can only find associations between a treatment and an outcome under specific set of circumstances, but it can't explain **why** that relationship exist.
- Our technology determines the independent and actual effect of a cause to identify the care that could produce the best outcome under future and different circumstances.
- By identifying the direct causes of unequal outcomes, Prosperdtx can improve the lives of cancer patients and solve for disparities in healthcare in underserved, minority communities.

We Use Causal Inference to Overcome Built-In Biases in Machine Learning Algorithms



Directed Acyclic Graph (DAG) COVID-19 Patient Data

Comprehensive DAG of patient data variables

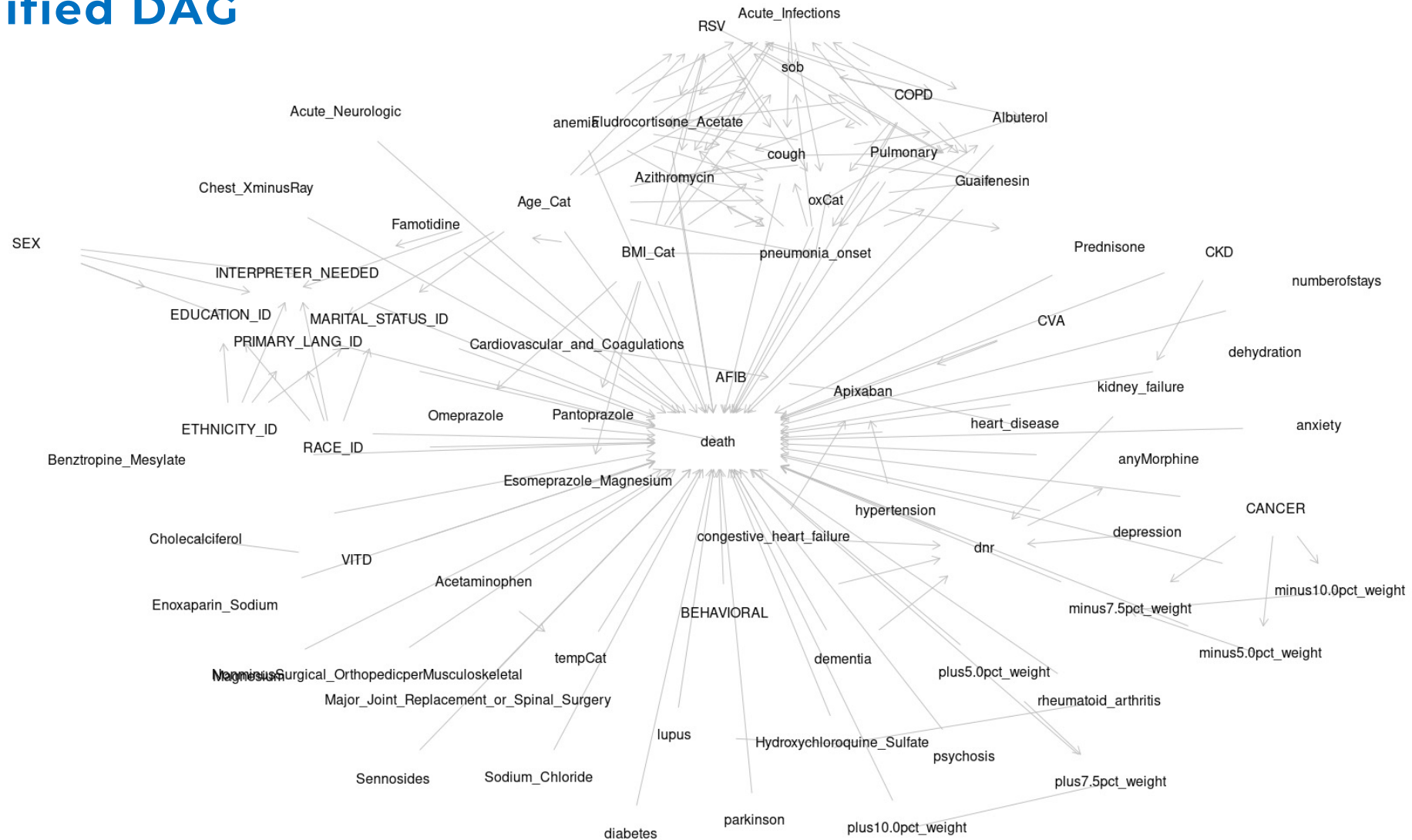


Comprehensive DAG (directed acyclic graph)
(actual Prosperdtx patient data DAG)

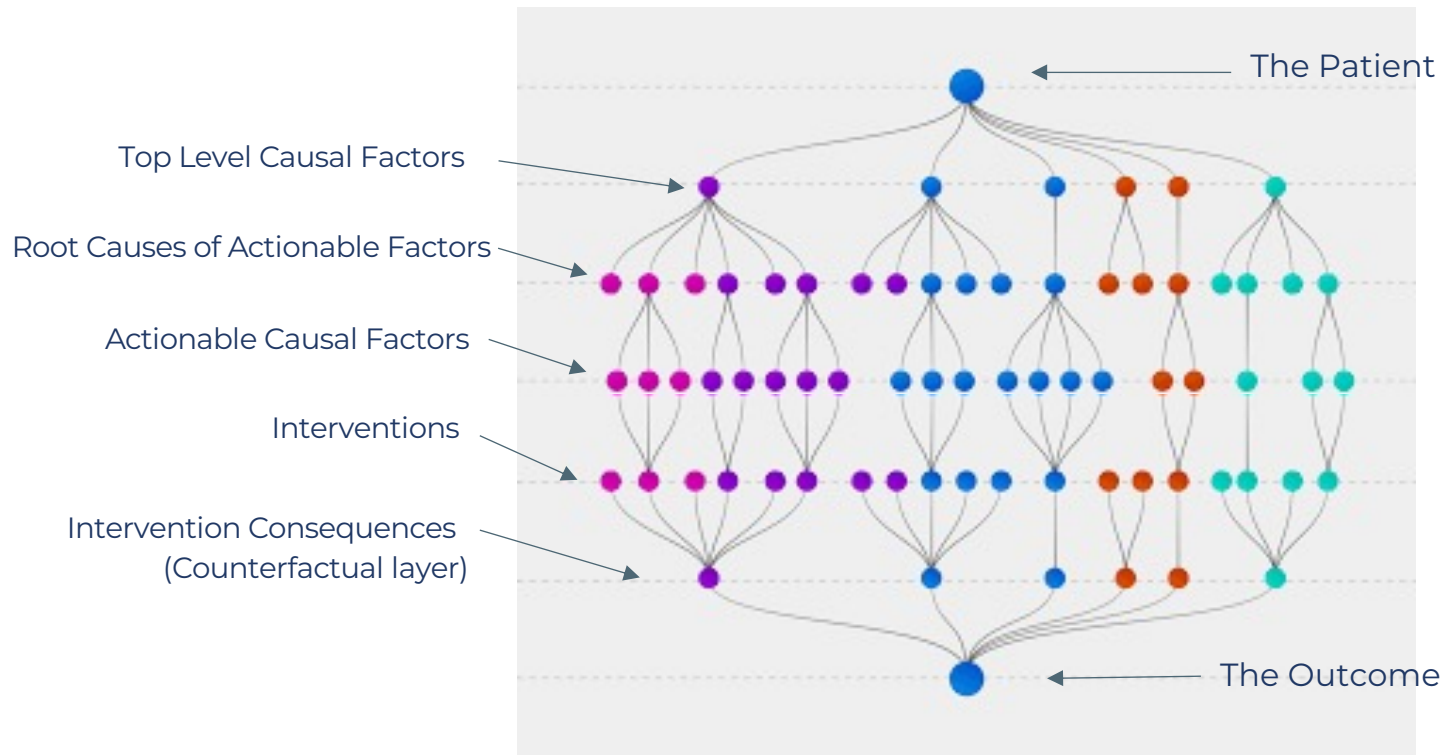


Directed Acyclic Graph (DAG) COVID-19 Patient Data

Simplified DAG



Causal-inference Machine Learning Identifies What Directly Impacts Outcomes From Patient-Level Data



Transparency of Causal Inference

