Multiple Instance Learning for ECG Risk Stratification
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*Learn* what a risky set of heartbeats look like!
We reframe the risk stratification task as a **multiple instance learning** problem.

* Labels of collections of instances are available, but labels of instances are not
* Assumption: patients at higher risk of cardiovascular death have *more* risky instances than those at lower risk
Our method consists of three steps: instance extraction, classification, and aggregation.
Produces a **state-of-the-art ECG-based risk score for cardiovascular death**
Takeaways

* We propose a general-purpose method for incorporating very long time series into risk models
* Using this method, we produce a state-of-the-art ECG-based risk score!

Thanks!