

## Observe Cell Response

## Elasticity Modeling

## Determine Effect Strength

## Construct Classifier

- ▶ Single cell indentation tests via atomic force microscopy X5 per Cell
- ▶ Pre-processing raw data to force vs indentation depth curves

- ▶ Estimate YM via for each test by fitting observed response to an indentation model
- ▶ Estimate apparent YM for each cell and account for uncertainty and error

- ▶ Estimate healthy vs diseased group characteristics, and uncertainty
- ▶ Quantify statistical significance and predictive power of the observed effect

- ▶ Determine suitable likelihood probability density functions
- ▶ Construct Bayesian classifiers and assess performance