

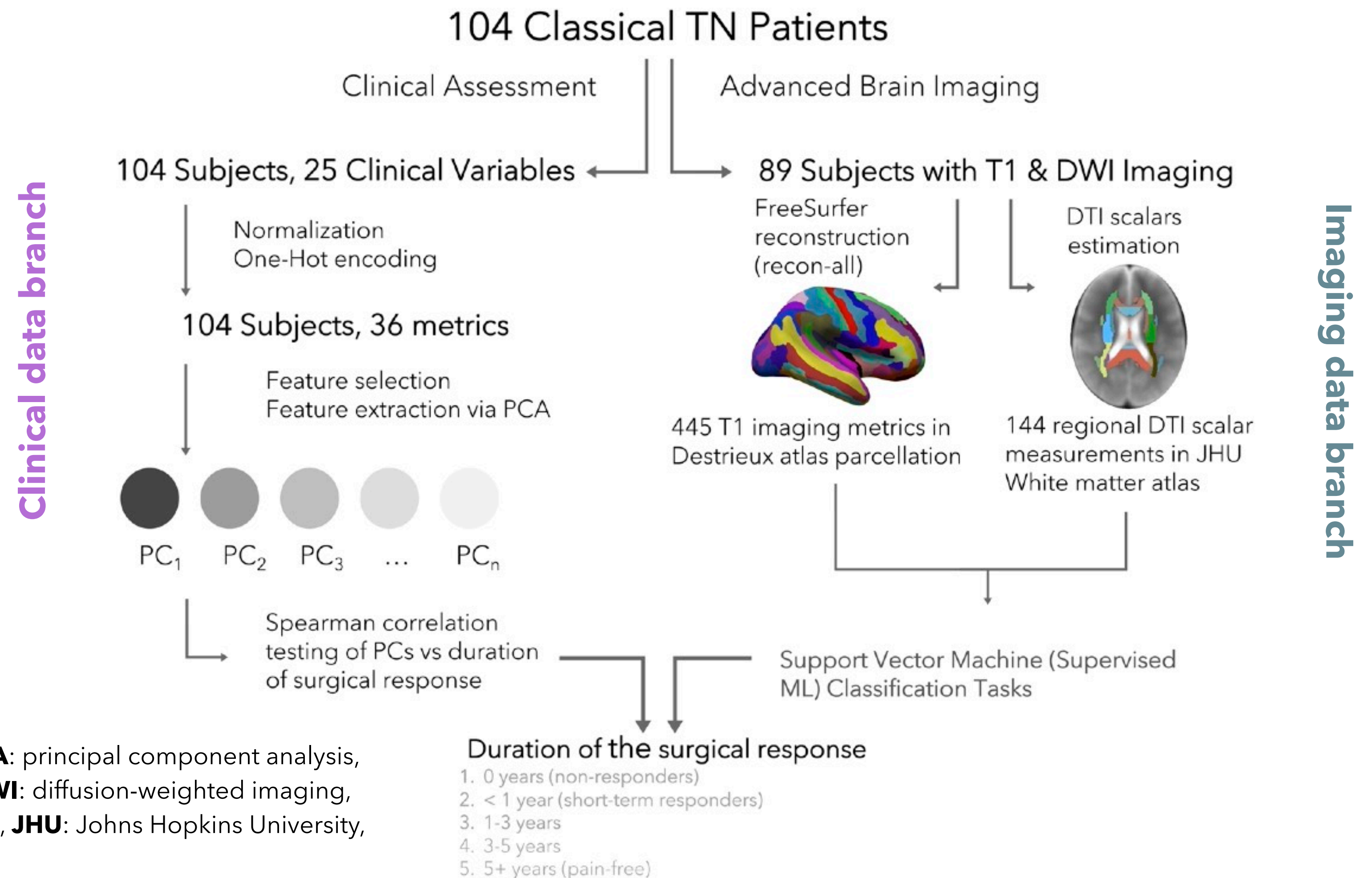
Design of study

Demographics and analysis pipeline

Dataset demographics	Initial diagnosis of Classical TN
Sample size (n)	104
Age (years)	60.3 ± 14.4
Sex (males : females)	44 : 60
Pain side (L : R)	38 : 66
Surgery (GK : MVD)	71 : 33

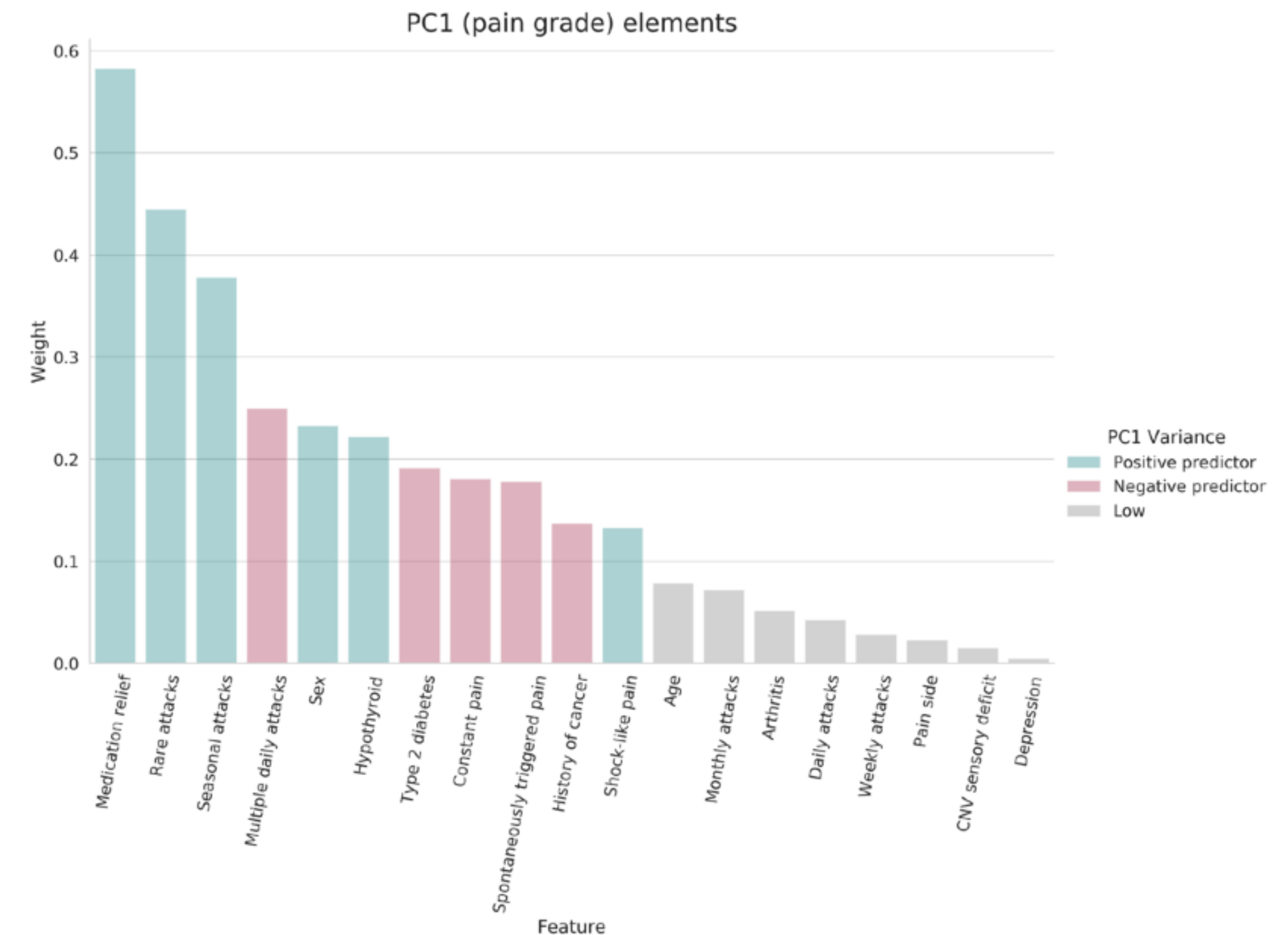
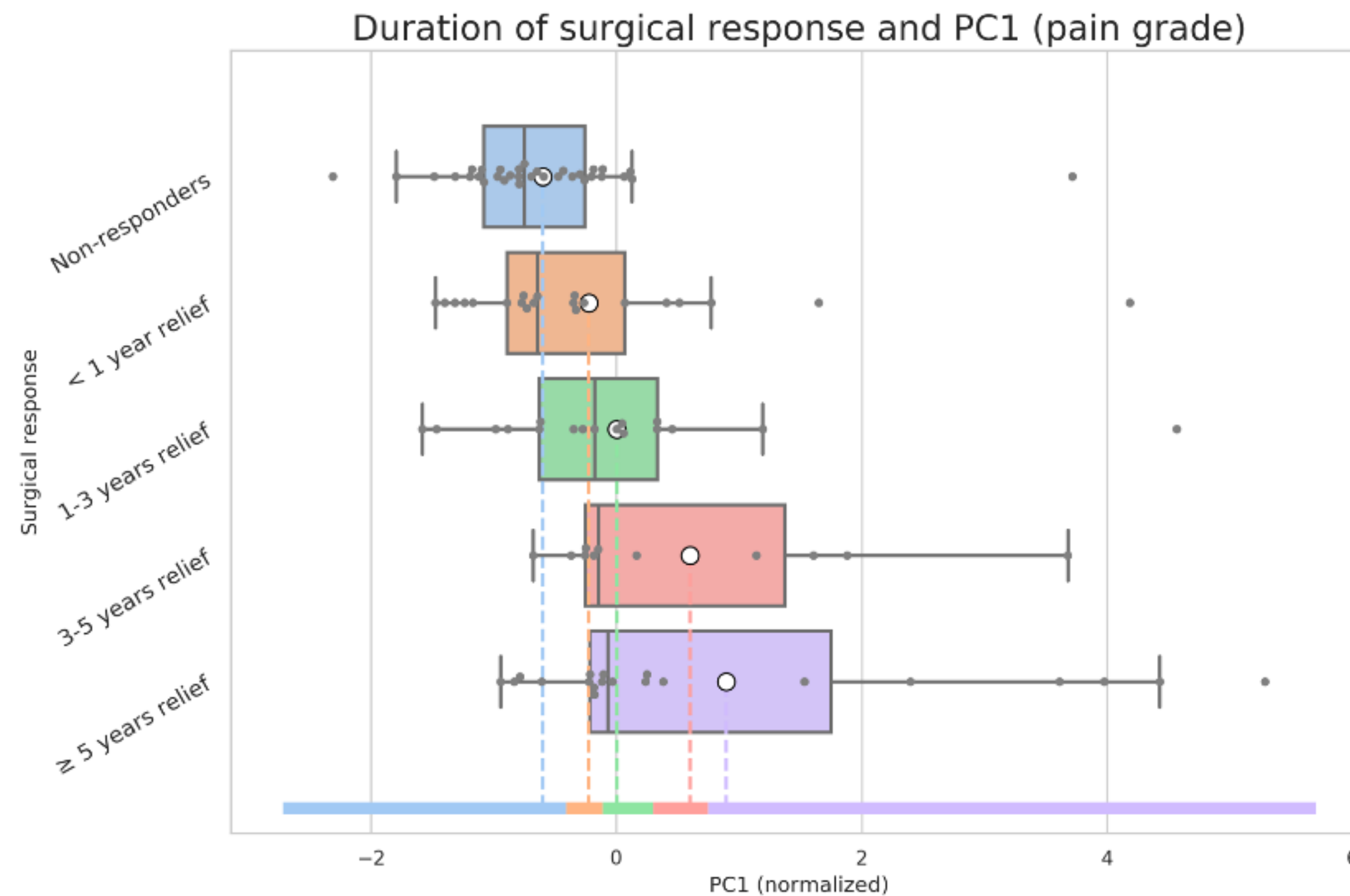
Patients were followed up for 5 years after the surgery or until pain recurrence

TN: trigeminal neuralgia, **PCA**: principal component analysis, **PC**: principal component, **DWI**: diffusion-weighted imaging, **DTI**: diffusion tensor imaging, **JHU**: Johns Hopkins University, **ML**: machine learning



Results

Clinical data branch



- 15 PCs to explain 95% of variance in data.
- PC1 vs Duration of response $r = 0.48$ [0.27 – 0.58] (p-corrected = 0.00004)

- PC1 is mainly defined by TN-related parameters
- The frequency of pain episodes, degree of medication relief, the character of pain as well as clinical history are predictive of the duration of surgical response

