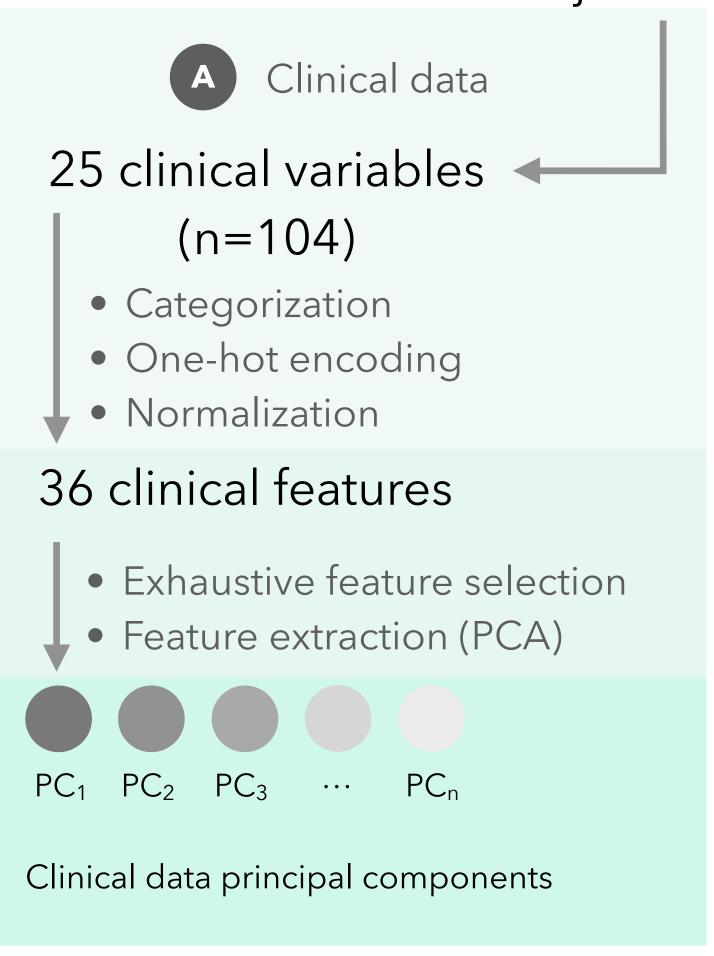
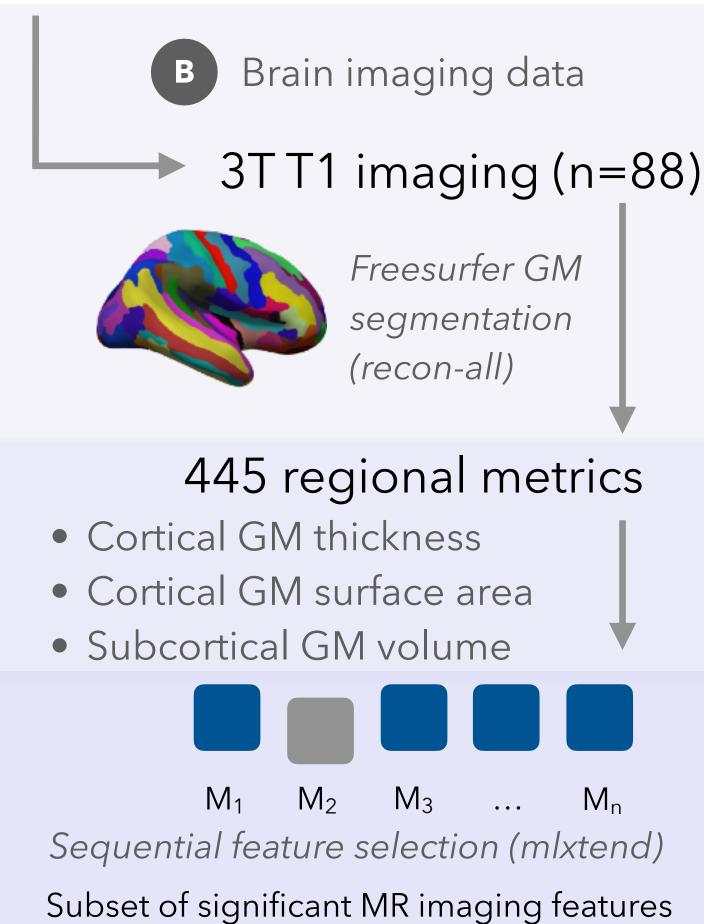
| Dataset demographics | Initial diagnosis of Classical TN |
|---|-----------------------------------|
| Sample size (n) | 104 |
| Age (years) | 60.3 ± 14.4 |
| Sex (males : females) | 44:60 |
| Pain side (L:R) | 38:66 |
| Surgery (GK : MVD) | 70:34 |
| Surgery outcome | |
| Non-responders (n) | 34 |
| Recurrence within 5 y after surgery (n) | 50 |
| Pain-free for more than 5 years (n) | 20 |

Table 1. Demographic information of study population

104 subjects with Classical TN





SVM Multiclass

classification of

surgical response

duration of

Spearman correlation of PCs with duration of surgical response

Duration of surgical response

- 1. Non-responders
- 2. Short-term responders (<1 year)
- 3. 1-3 year responders
- 4. Long-term responders (3-5 years)
- 5. Super responders (> 5 years)

Fig. 1: Processing pipeline. A - clinical data branch - clinical data undergoes transformation to categorical features, one-hot encoding and normalization. Principal component analysis (PCA) and exhaustive feature selection have been done. A set of features having the strongest correlation with surgical response duration was determined. B - Imaging branch - T1 data was processed in Freesurfer and regional gray matter metrics were extracted. Sequential feature selection and SVM Classification model were used to predict the duration of surgical response.