Summary

Outcome

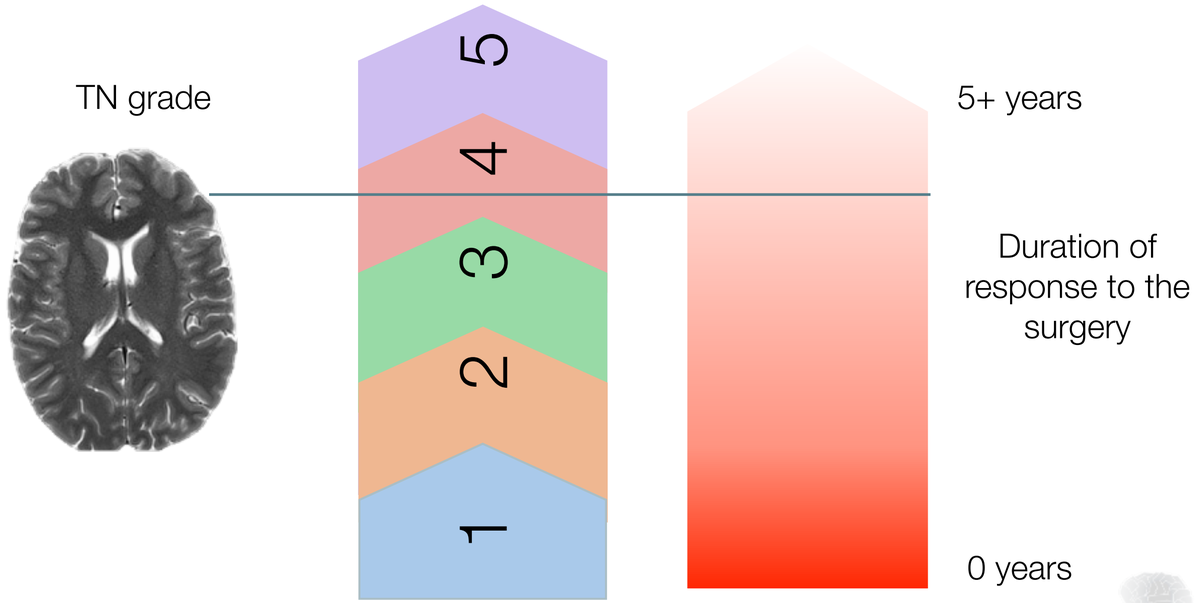
- Potential framework to provide a foundation for future development of ML-driven, clinical tools for TN assessment and surgical outcome prognostication.

Key takeaways

- Comparably to imaging data, clinical data may also be applied in ML to better understand and treat TN.
- TN-related features were largely prioritized by unsupervised ML
- TN classes defined based on the duration of surgical response are distinguishable by ML algorithms and express specific clinical symptoms, identified by PC1 (Pain grade).

Future directions

- **Supervised ML** utilizing advanced imaging data (objective measure) and novel pain grade metric (from subjective reports) to develop a surgical outcome prognostication tool. Exploring deep learning architectures
- **A novel classification of TN** which will reflect the potential surgical outcome and allow for better patient selection for surgery



Hodaie Lab

Principal investigator
Dr Mojgan Hodaie

Graduate students
Jerry Li

Research staff
Dr. Daniel Jörgens
Dr. Patcharaporn Srisaikaew
Annette Wanzhang Wang
Dr. Basmah AlTinawi
Zackary Tsang

Summer students
Rose Yakubov
Matthew So
Shawn Hanycz
Alana Byeon
Jonah Isen

Barketing staff
Tommy

Collaborators
Dr. Matthew Walker
Dr Frank Rudzicz
Dr David Mikulis
Marina Tawfik
Dr. Peter Hung
Pascale Tsai
Dr Sarasa Tohyama