Craniopharyngiomas are rare, benign brain tumors located near critical structures such as the optic chiasm and hypothalamus. Accurate delineation of these tumors on MRI is essential for diagnosis, surgical planning, and treatment monitoring. However, manual segmentation is time-consuming, subject to inter-observer variability, and requires expert radiological input. This project aims to develop a robust, automated image segmentation model for craniopharyngiomas using biomedical image analysis techniques. By leveraging expert-annotated MRI datasets, including T1CE, T2, and T2 FLAIR sequences, the model will learn to accurately identify and segment tumor regions, improving efficiency and reproducibility in clinical studies.

The patient population has already been prepared, including:

- Chart reviewed and completed
- MRIs collected and anonymized
- MRIs registered to a common space
- Tumors manually annotated