

# Brain gliomas: Comparison between the human and canine species

Xavi Fernández Rodríguez

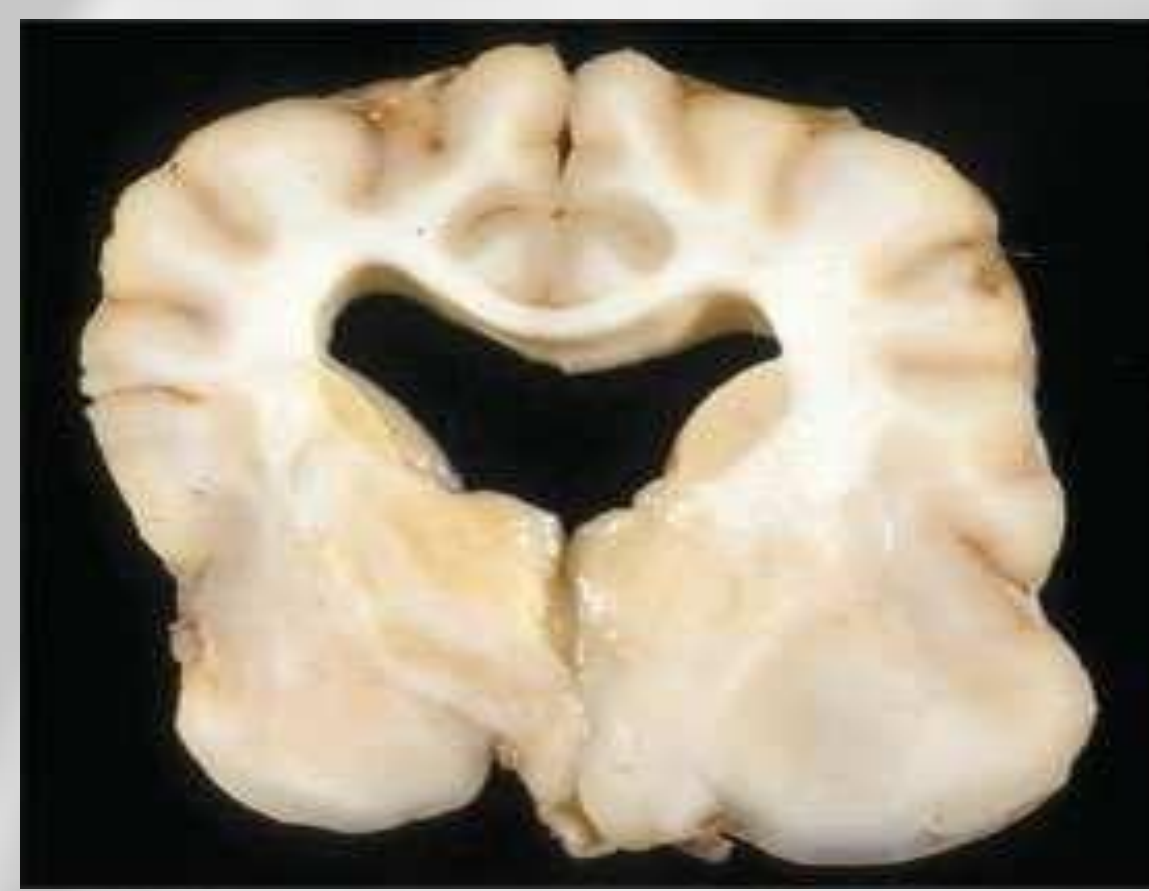
End of Grade Project

June 2018

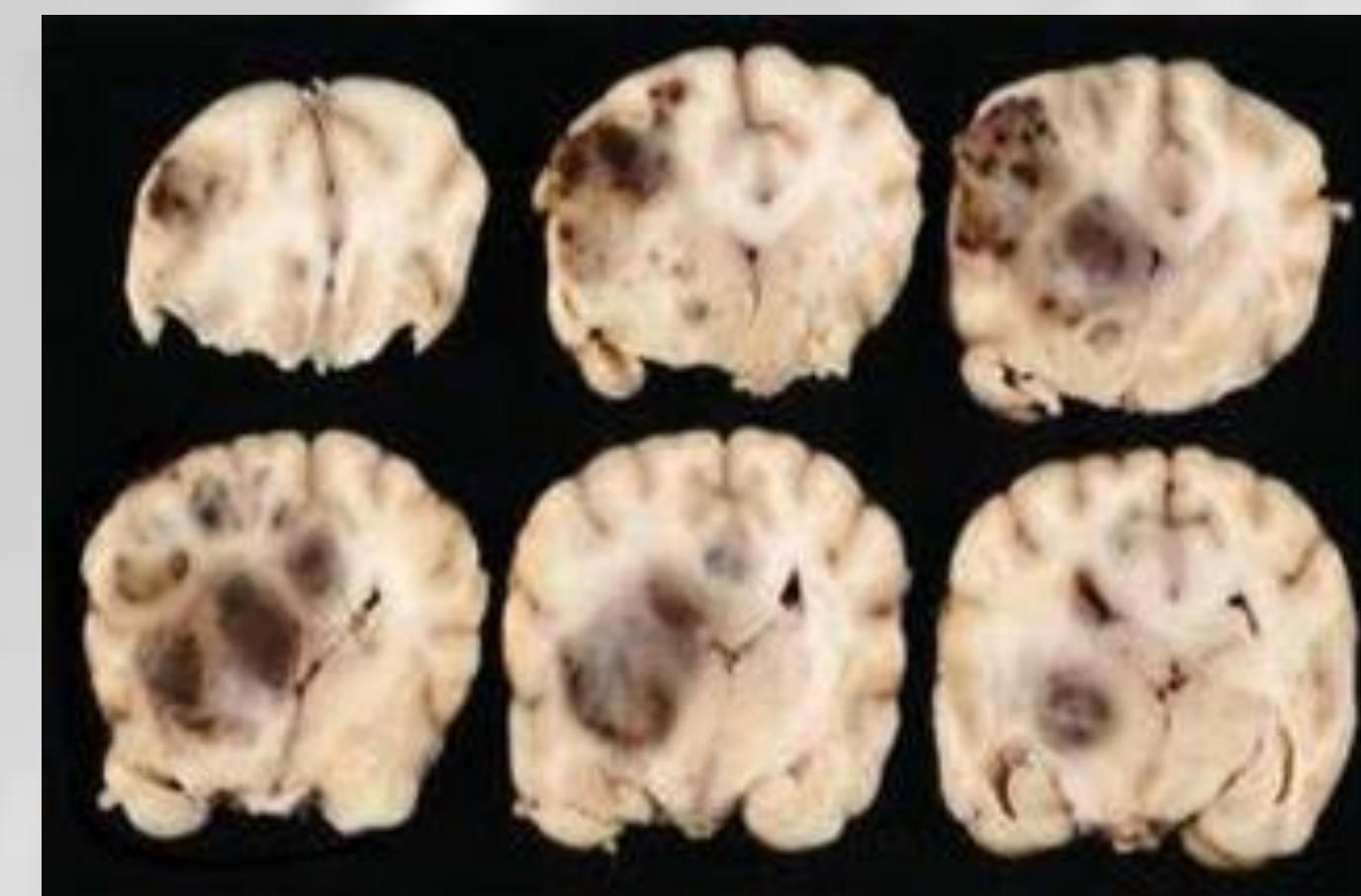
## Introduction and objectives

Primary neoplasms of the brain are relatively common in dogs and humans (14,5 per 100,000 pets at risk vs 20,5 per 100,000 patients at risk, respectively). As there are demonstrated similarities between human and canine gliomas the objective of this study is to review the current literature about diagnostic tools, treatments, staging methods, prognosis and sequels for both species.

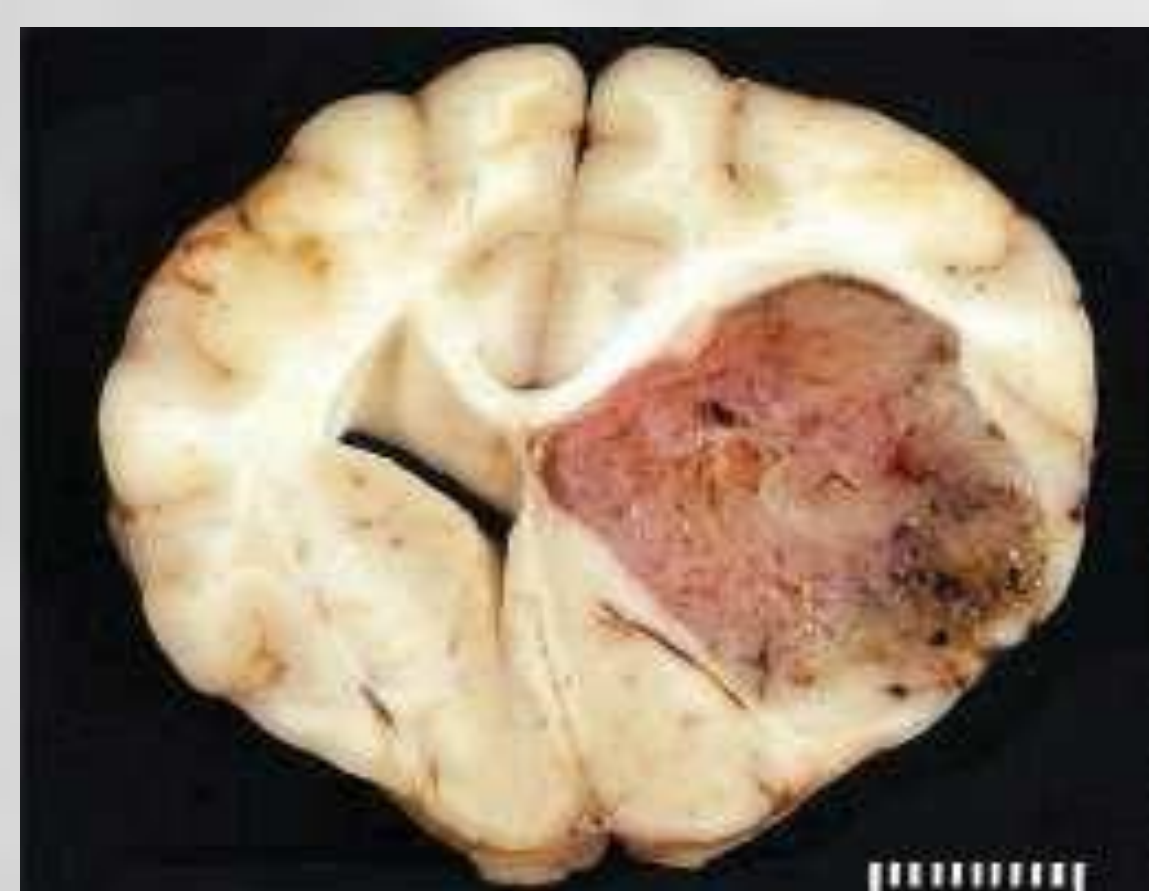
## Classification of gliomas



Diffuse astrocytoma (grade II astrocytoma)



Glioblastoma multiforme (grade IV astrocytoma)



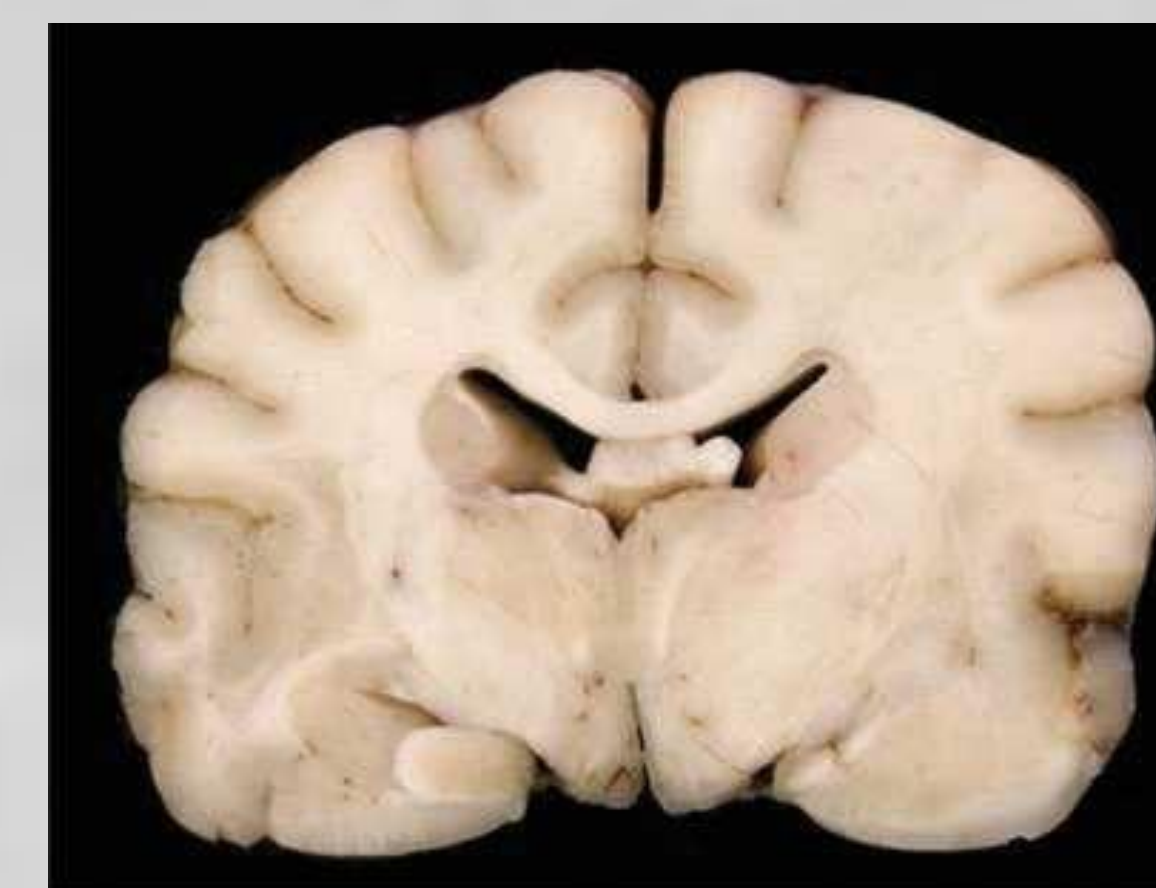
Oligodendroglioma



Mixed glioma (Oligoastrocytoma)



Ependymoma



Gliomatosis cerebri

## Conclusions

	Human	vs	Canine
Diagnosis	Based on MRI. Similar clinical findings and symptoms. Gene mutation studies included to have more information.		Based on MRI. Similar clinical findings and symptoms. No gene mutations identified.
Staging	2016 WHO classification of tumors based on histological, genetical and molecular characteristics		2007 WHO classification of tumors based only on histological characteristics
Treatment	Surgery and RT as base, plus chemotherapy. Experimental treatments such as CED and VMAT		Surgery and RT as base, chemotherapy does not increase survival rates. Experimental treatments such as SRS and IT
Prognosis	Highly variable, depends on entity, grade of tumor, age, mental and physical status and treatment		Poor prognosis and/or euthanasia. At most 2 years of median survival time
Sequels	Caused by tumor location, size and grade and treatment applied.		Observable sequels are basically due to treatment (euthanized or death before the disease advances).

