



Centre de
Diagnòstic
Biomèdic

CLÍNIC
BARCELONA
Hospital Universitari



SOCIETAT CATALANA

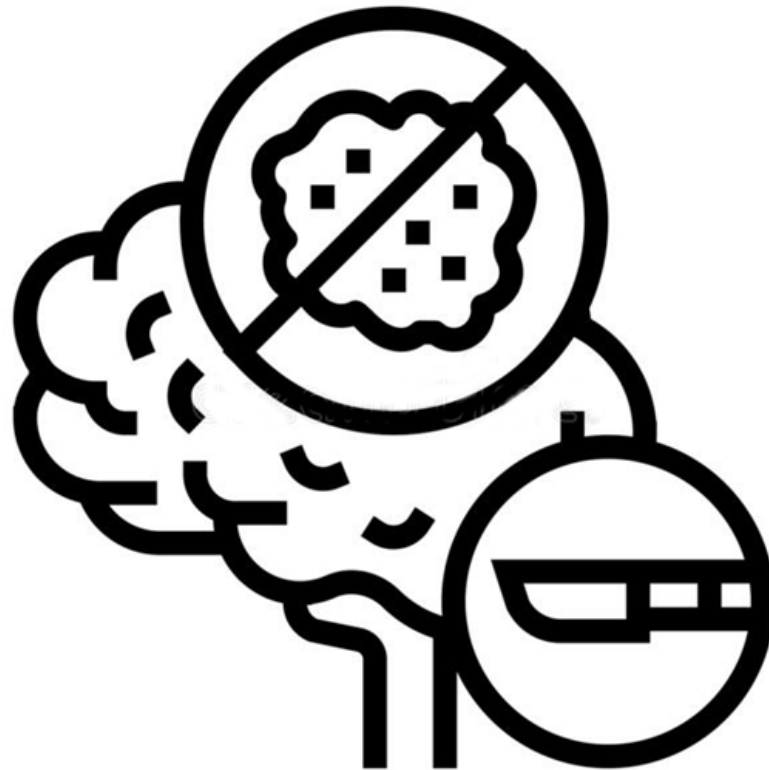
D'ANATOMIA PATOLÒGICA

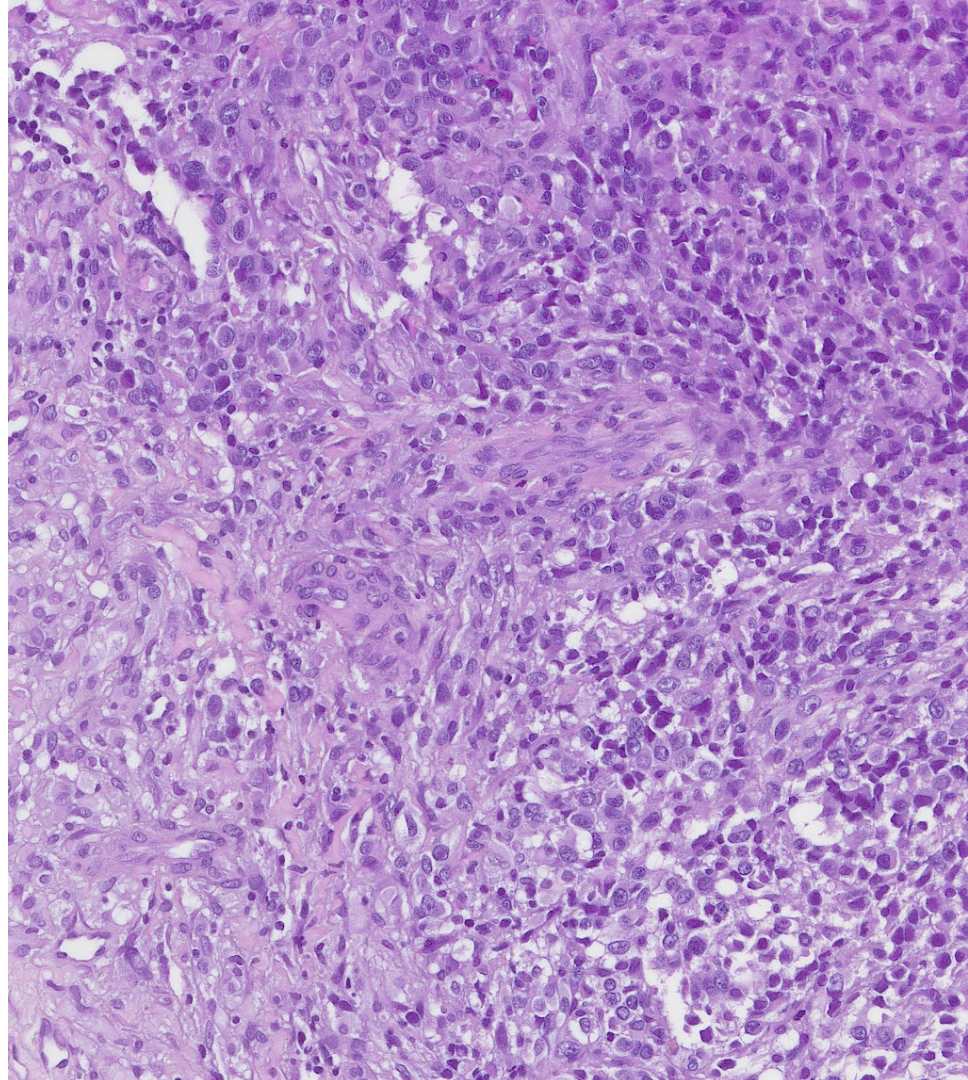
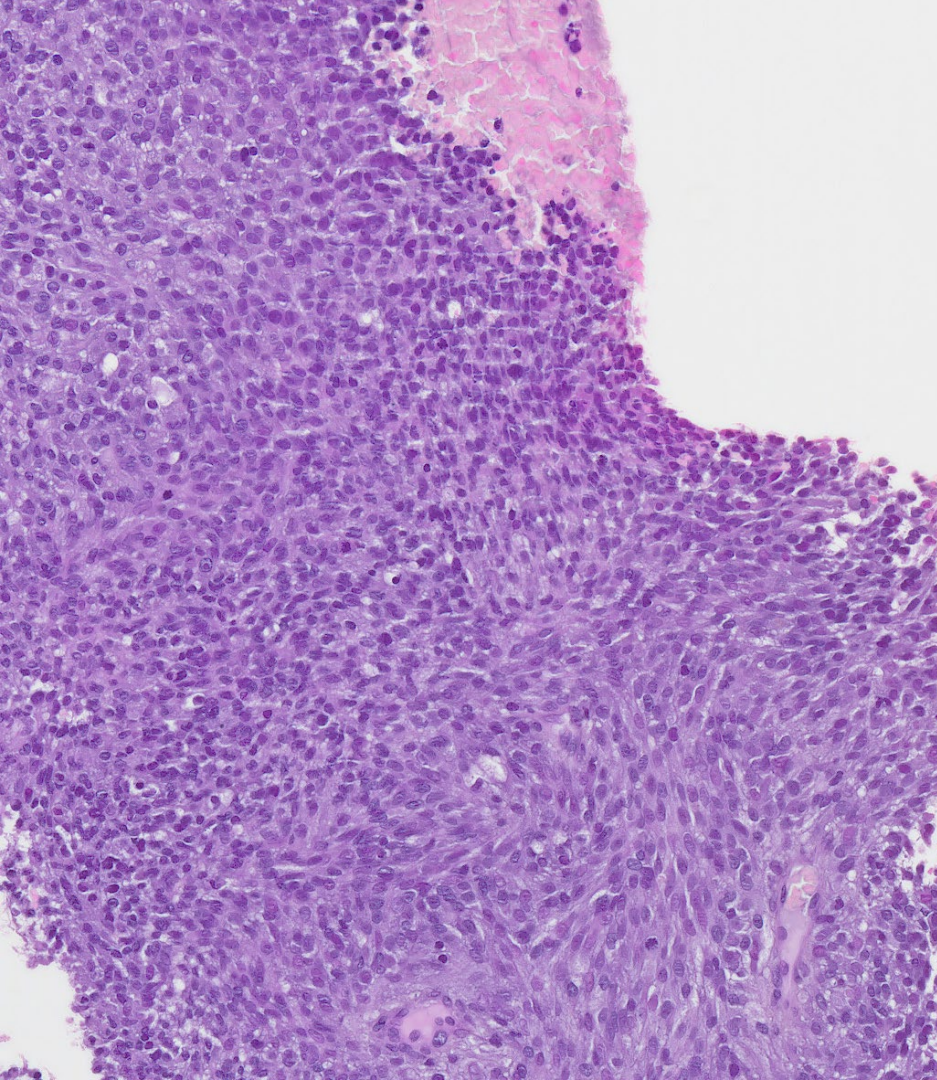
Tumor cerebral en una dona jove

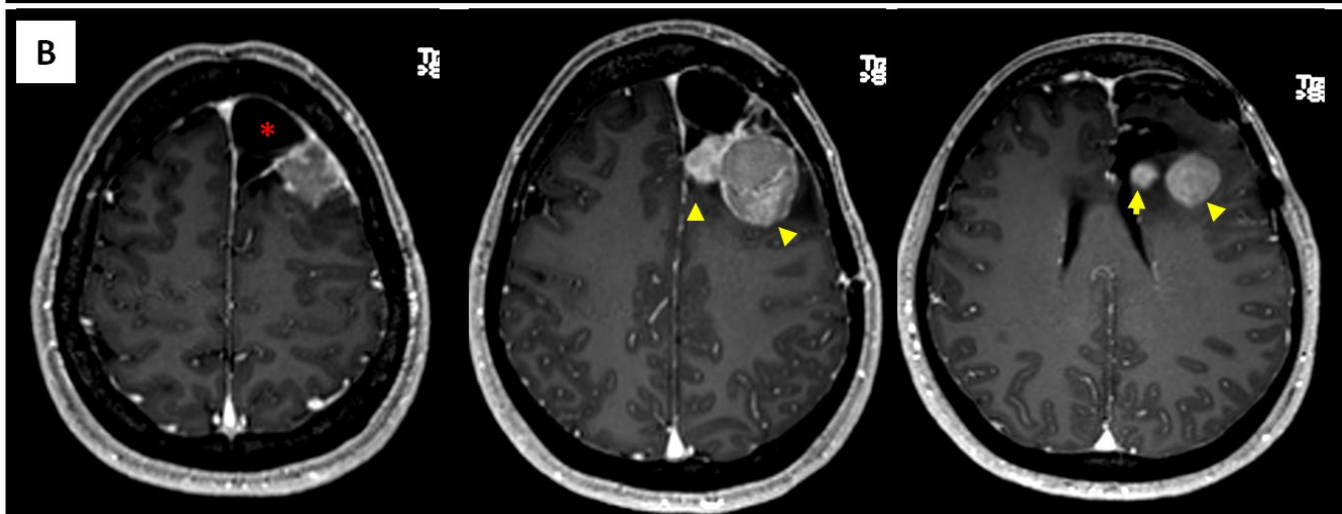
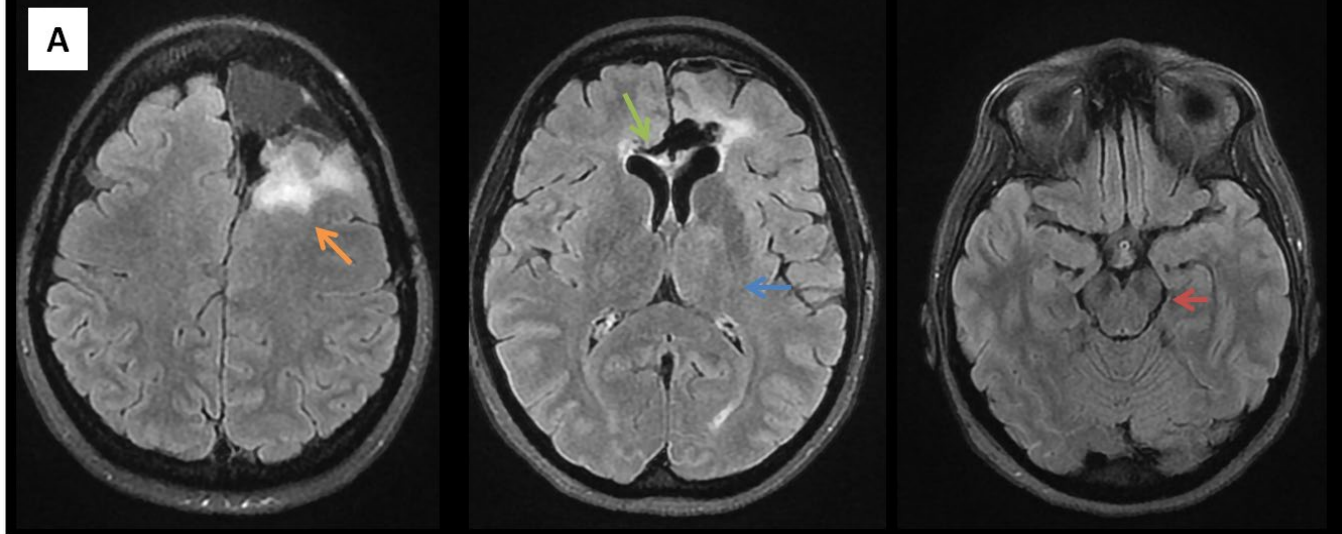
Jose Guerrero Pineda
Hospital Clínic de Barcelona

Sessió de Nous Patòlegs
XV Congrés de la Societat Catalana d'Anatomia Patològica
27/05/2022

Dona 37 anys (2019)



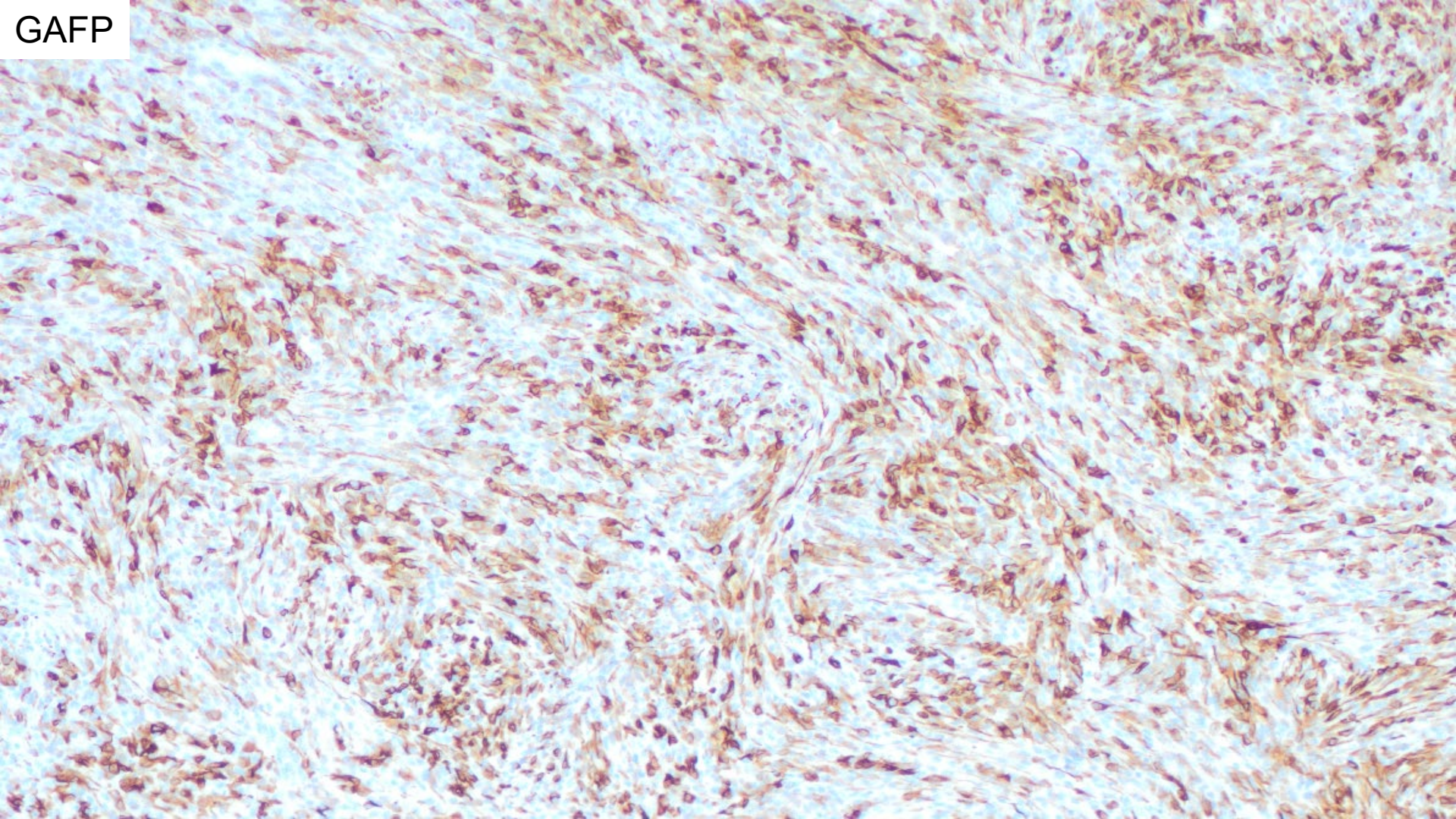


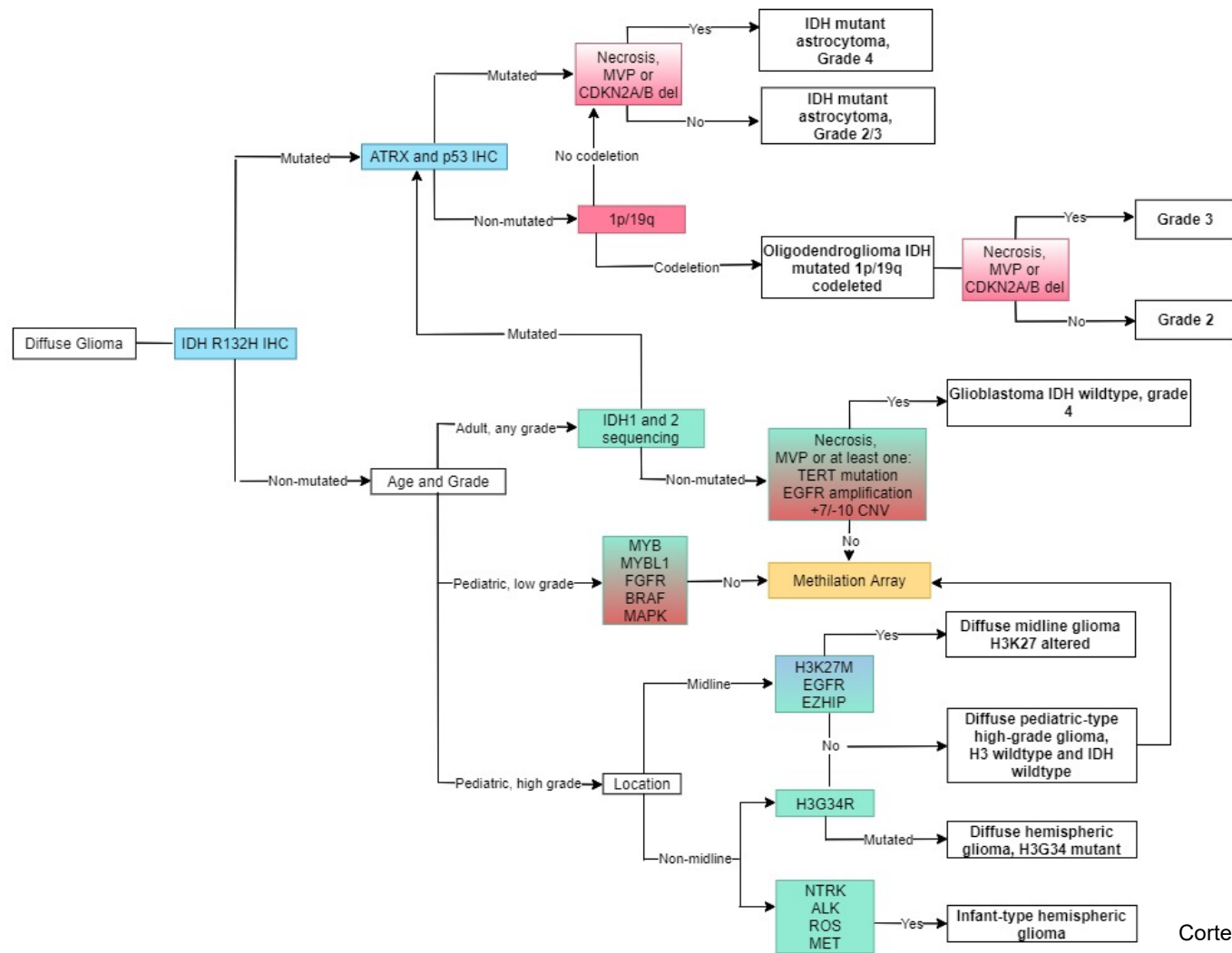


DIAGNÒSTIC DIFERENCIAL

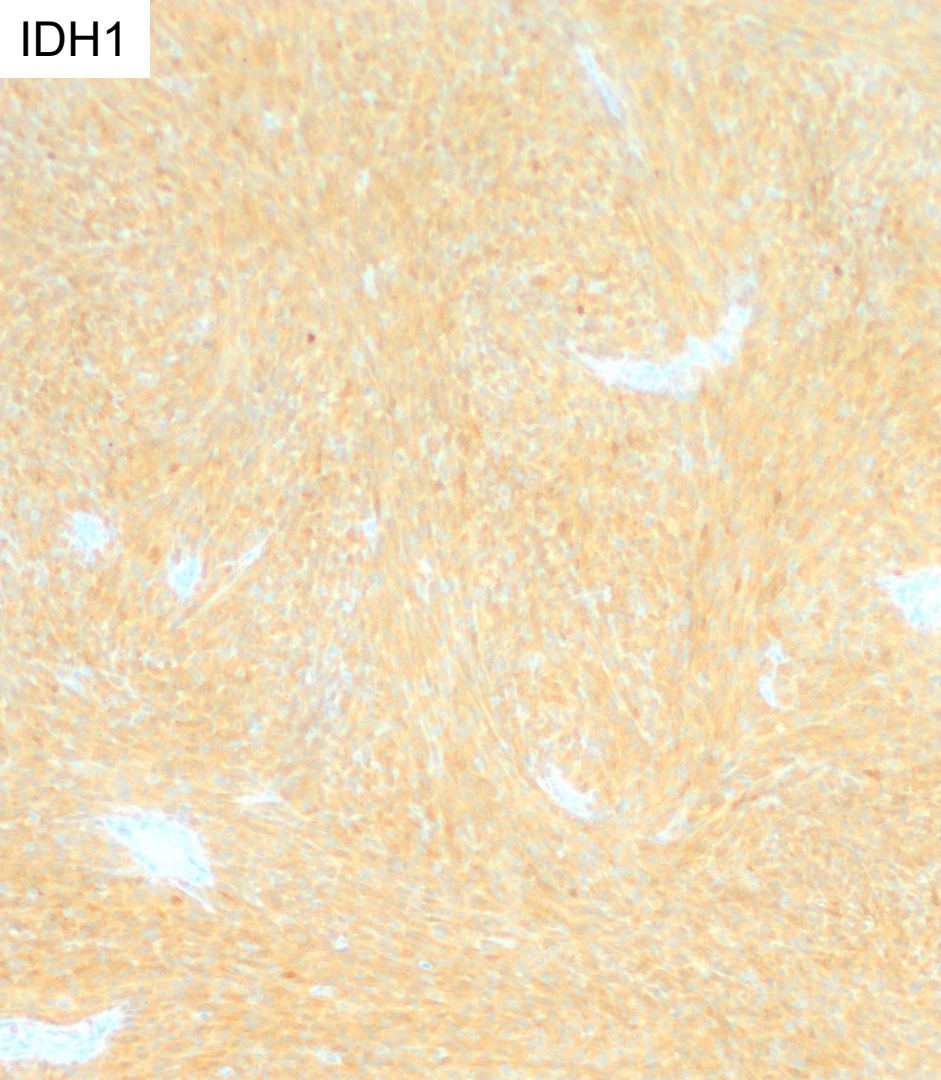
- Glioma d'alt grau de l'adult
- Meningioma
- Tumor fibrós solitari / hemangiopericitoma
- Tumors de parts toves

GAFP

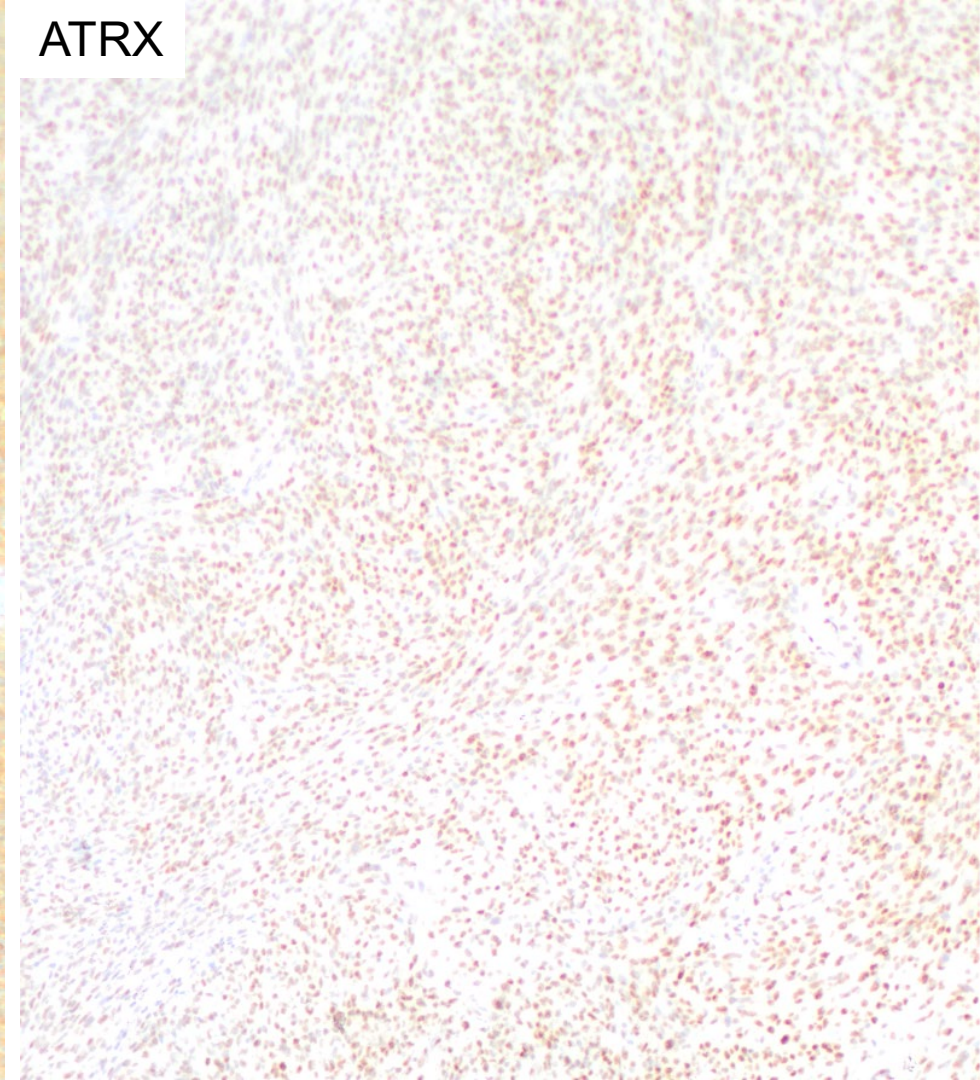




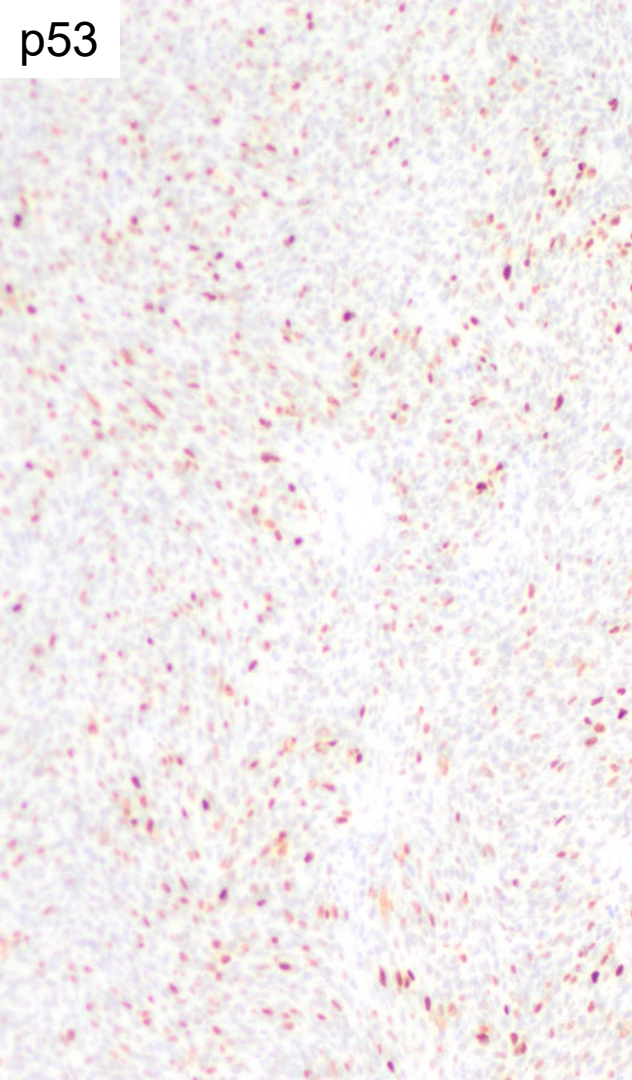
IDH1



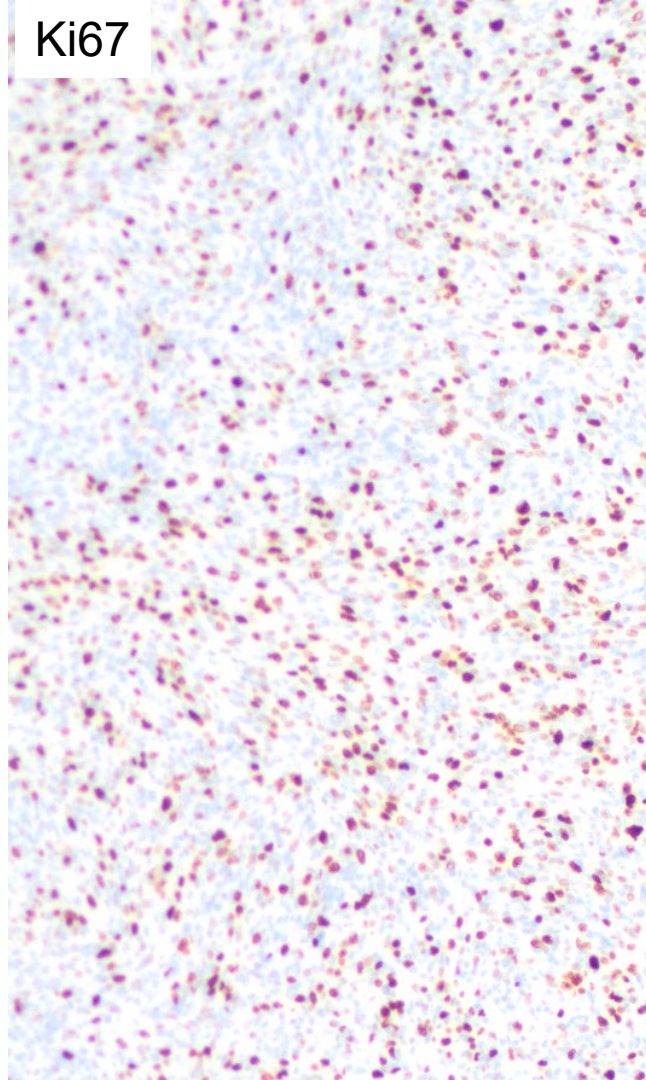
ATRX



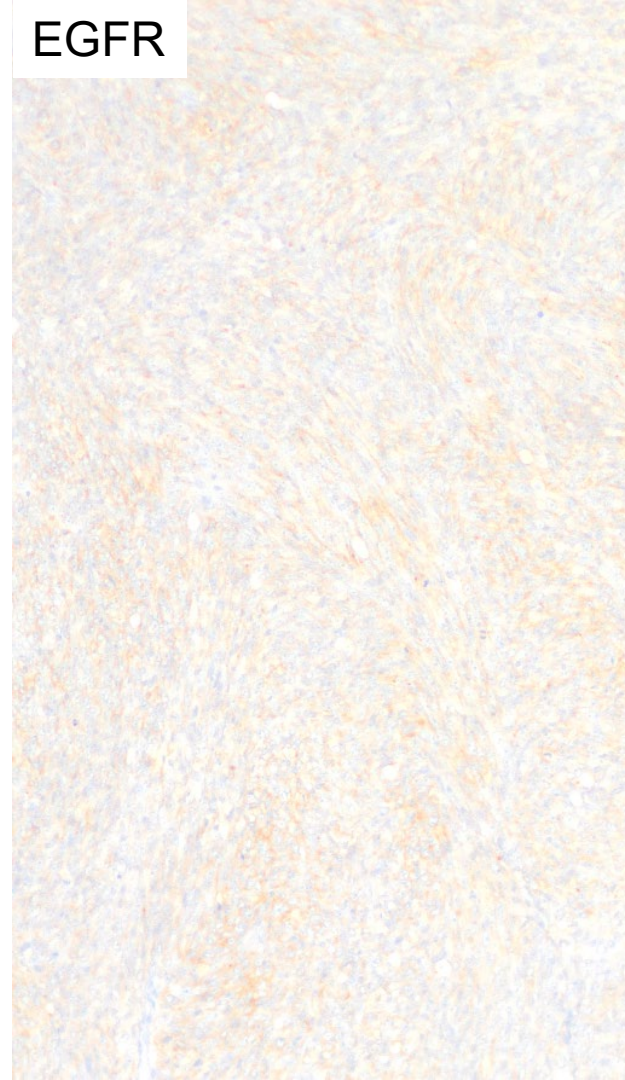
p53

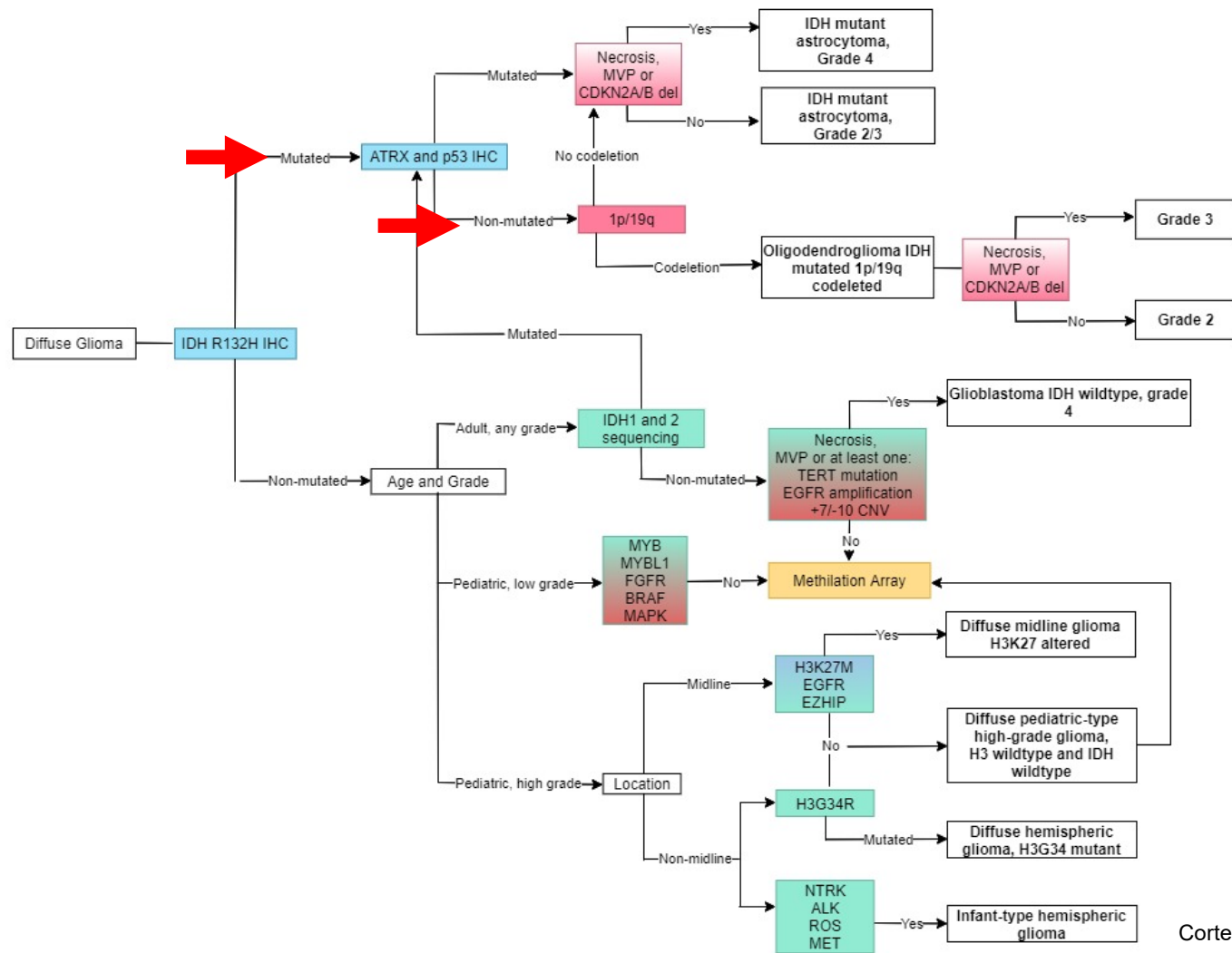


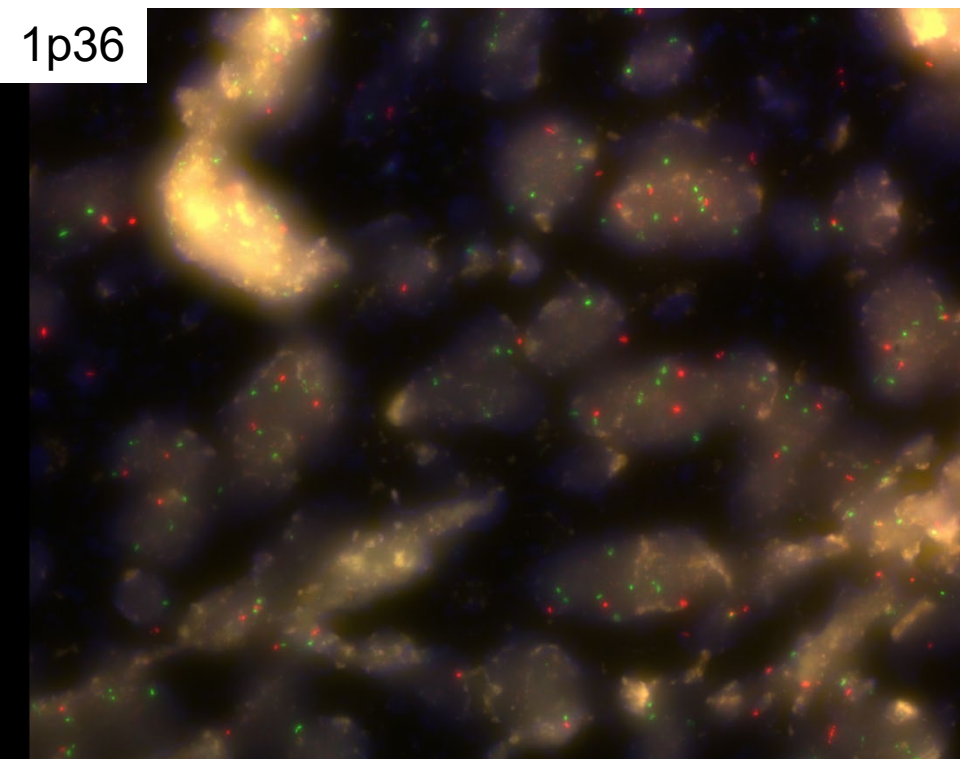
Ki67



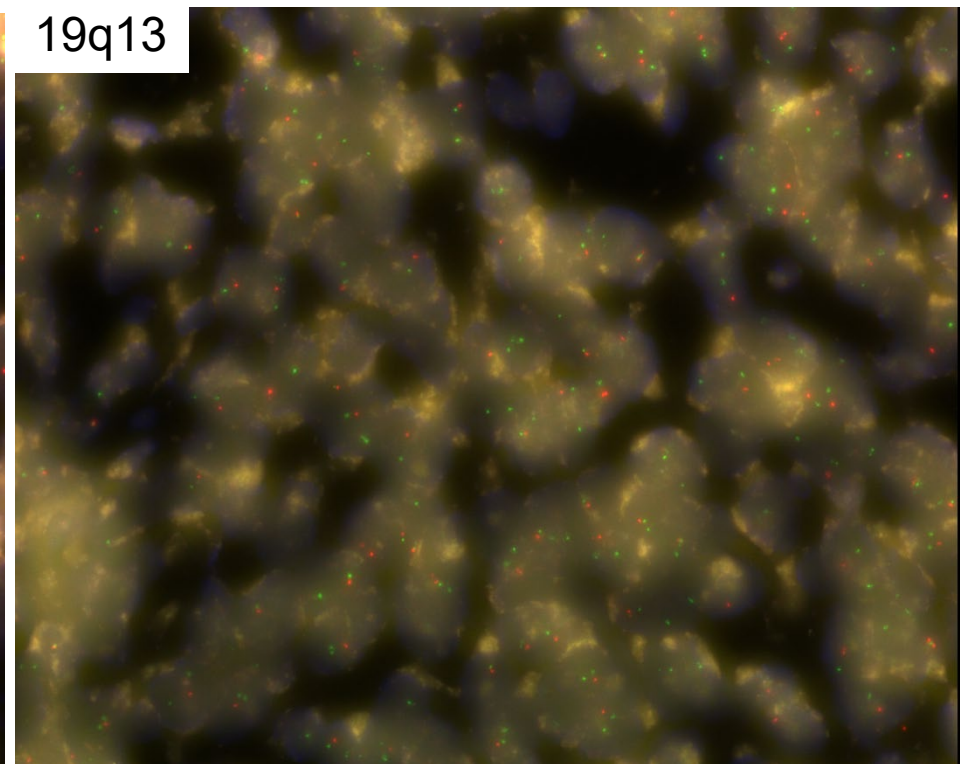
EGFR







Delecions 73%



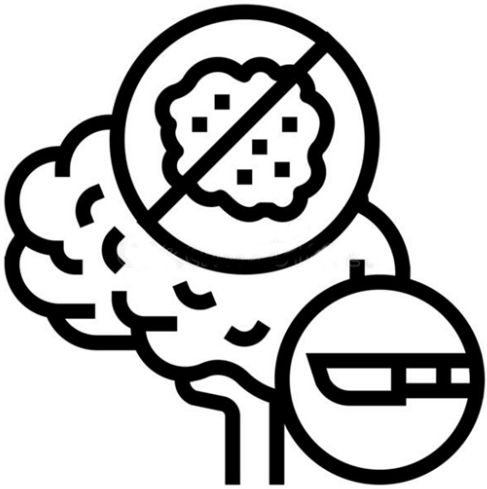
Delecions 62%

Diagnòstic integrat

- Oligodendroglioma anaplàsic IDH1 mutat i 1p/19q codelecionat
 - Focus d'aspecte sarcomatoide
 - Grau III (OMS 2016)
 - Perfil molecular:
 - IDH1 mutat, ATRX no mutat i p53 inespecífic per immunohistoquímica
 - 1p/19q codelecionat per FISH

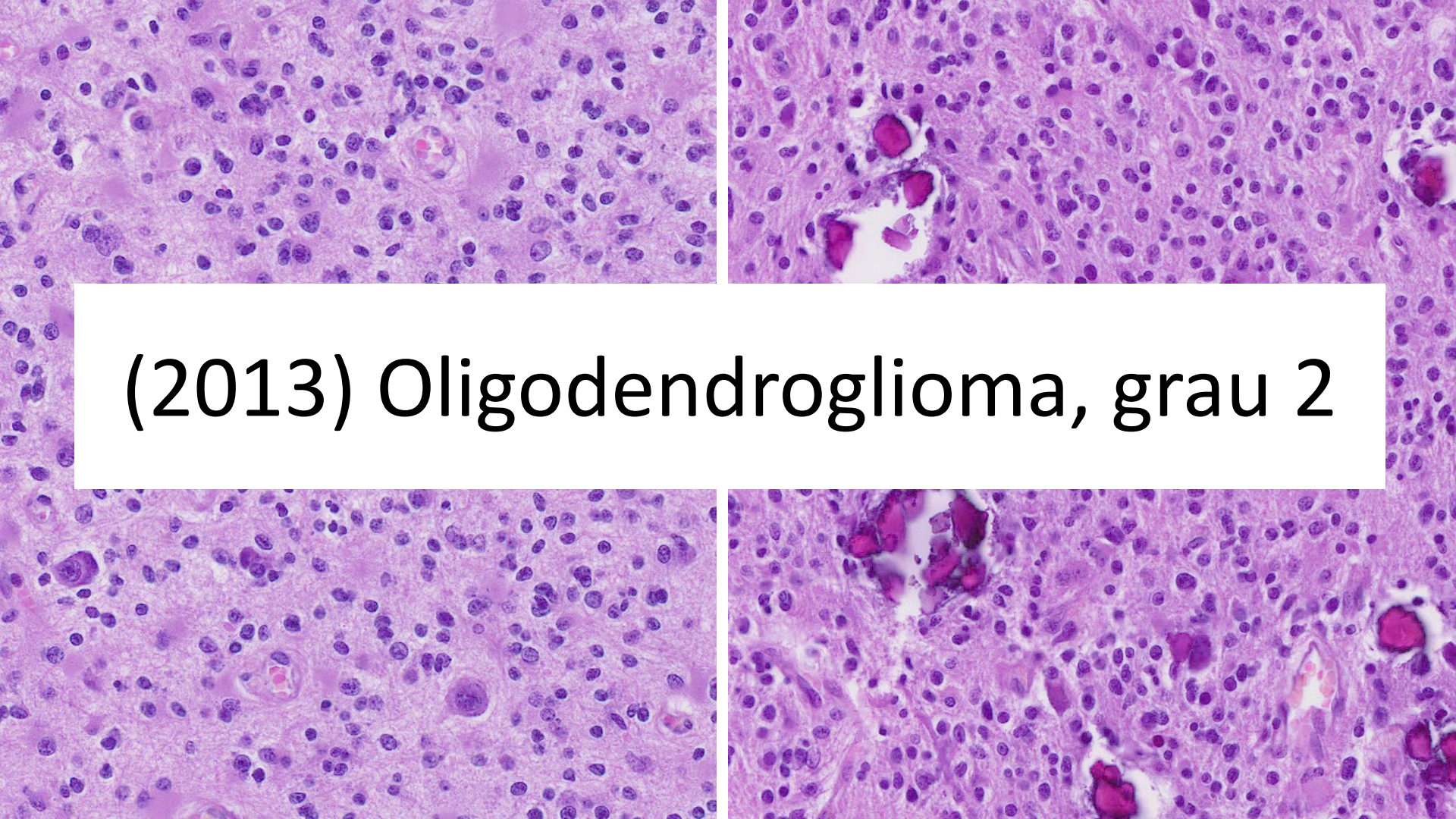
HISTORIA CLÍNICA

♀ Naix. 1982

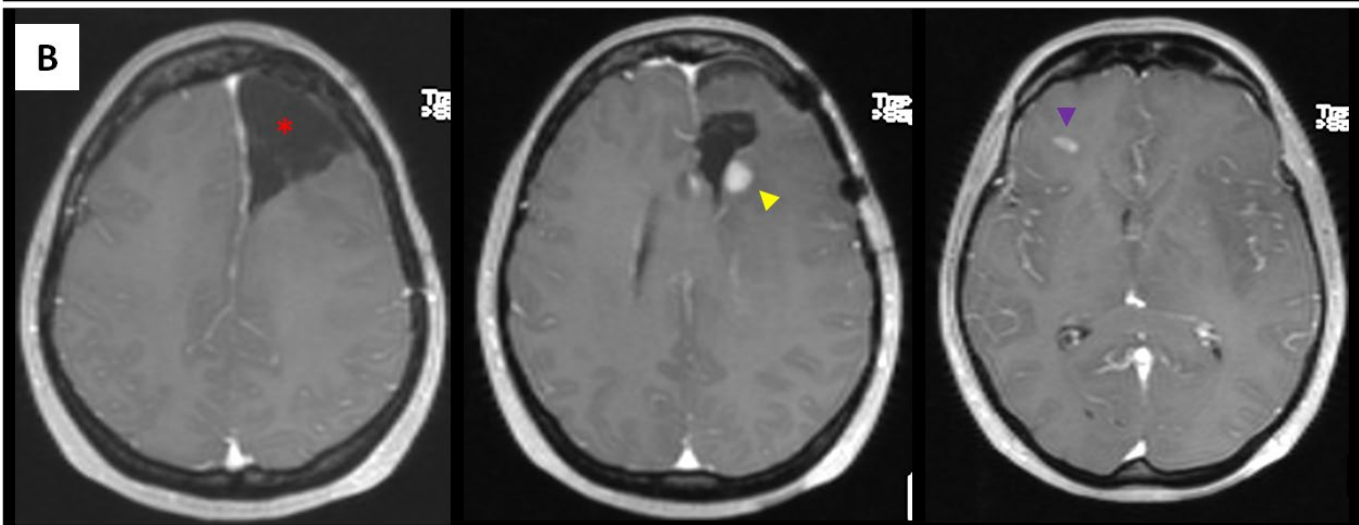
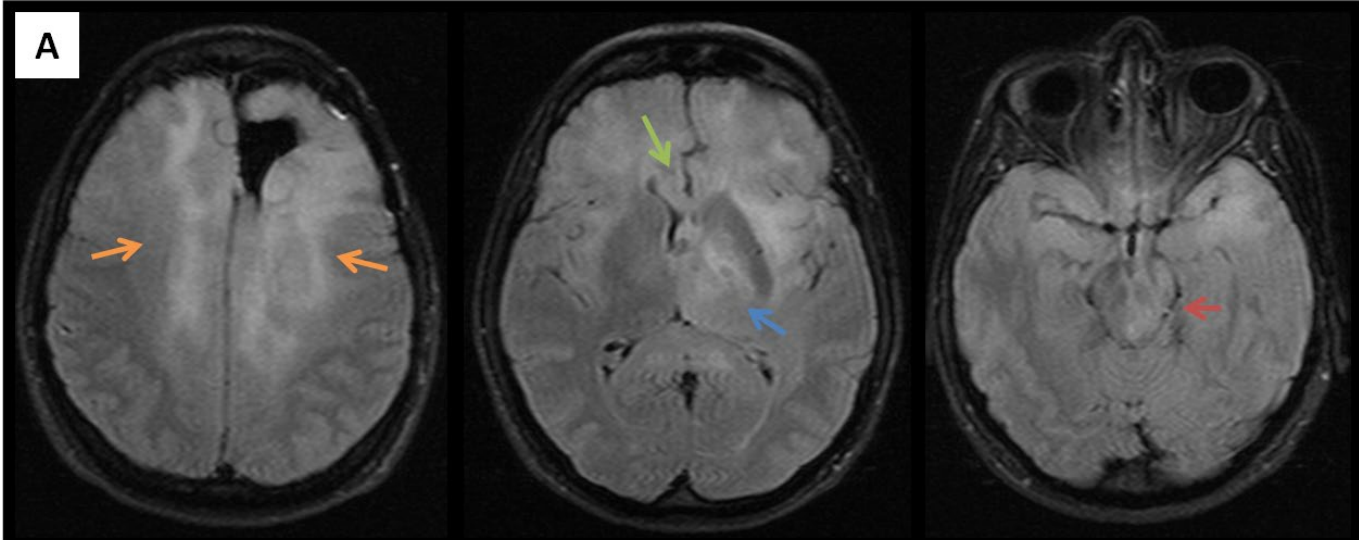


- 2013: Crisis convulsives
- 2017: 1ra recaiguda
- 2019: 2na recaiguda

- Resecció
- Quimioteràpia
- Resecció

The image is a composite of four microscopic views of a grade 2 oligodendroglioma, arranged in a 2x2 grid. The central white box contains the text "(2013) Oligodendroglioma, grau 2". The surrounding histological sections show a dense population of tumor cells with characteristic "fried egg" morphology, where the nuclei are round and separated by a thin rim of clear cytoplasm. The background is a pink-stained fibrillary matrix. Some areas show more pronounced cellular atypia and mitotic figures, while others show more typical low-grade features.

(2013) Oligodendroglioma, grau 2



WHO CNS5 (2021)

- Gliomes, tumors glioneuronals i tumor neuronals
 1. Gliomes difusos de l'adult
 2. Gliomes difusos de baix grau de tipus pediàtric
 3. Gliomes difusos d'alt grau de tipus pediàtric
 4. Gliomes astrocítics circumscrits
 5. Tumors glioneuronals i neuronals
 6. Ependimomes

Table 1 2021 WHO Classification of Tumors of the Central Nervous System. Provisional Entities are in Italics

World Health Organization Classification of Tumors of the Central Nervous System, fifth edition

Gliomas, glioneuronal tumors, and neuronal tumors

Adult-type diffuse gliomas

Astrocytoma, IDH-mutant

Oligodendroglioma, IDH-mutant, and 1p/19q-codeleted

Glioblastoma, IDH-wildtype

Pediatric-type diffuse low-grade gliomas

Diffuse astrocytoma, *MYB*- or *MYBL1*-altered

Angiocentric glioma

Polymorphous low-grade neuroepithelial tumor of the young

Diffuse low-grade glioma, MAPK pathway-altered

Pediatric-type diffuse high-grade gliomas

Diffuse midline glioma, H3 K27-altered

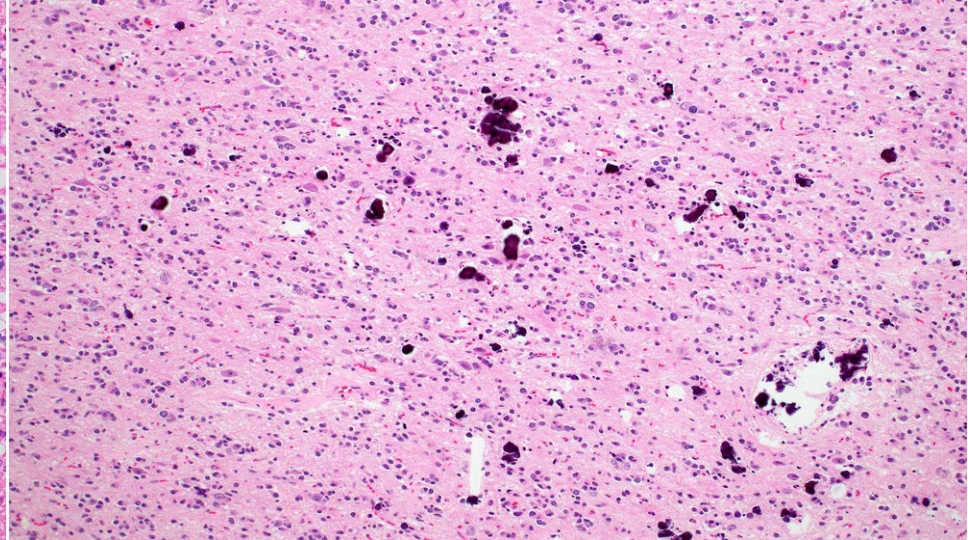
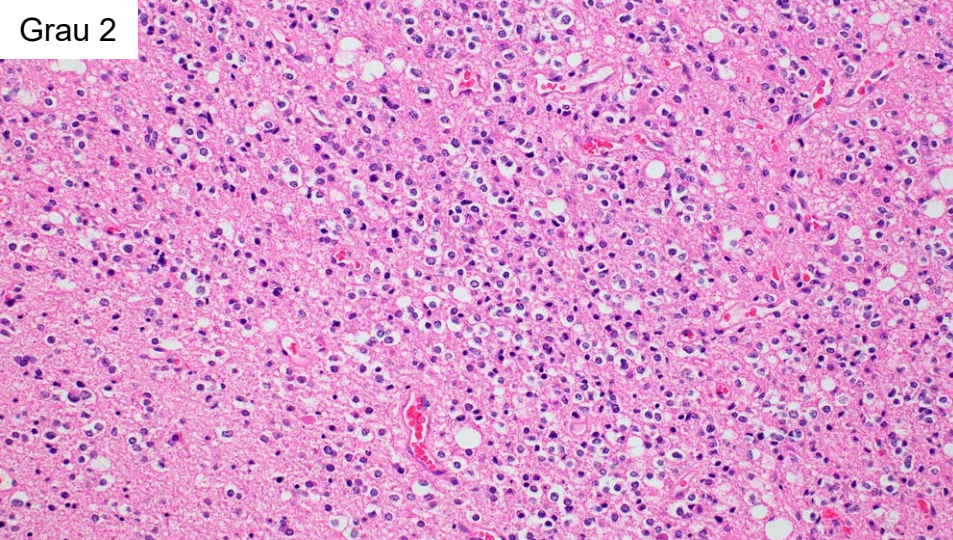
Diffuse hemispheric glioma, H3 G34-mutant

Diffuse pediatric-type high-grade glioma, H3-wildtype and IDH-wildtype

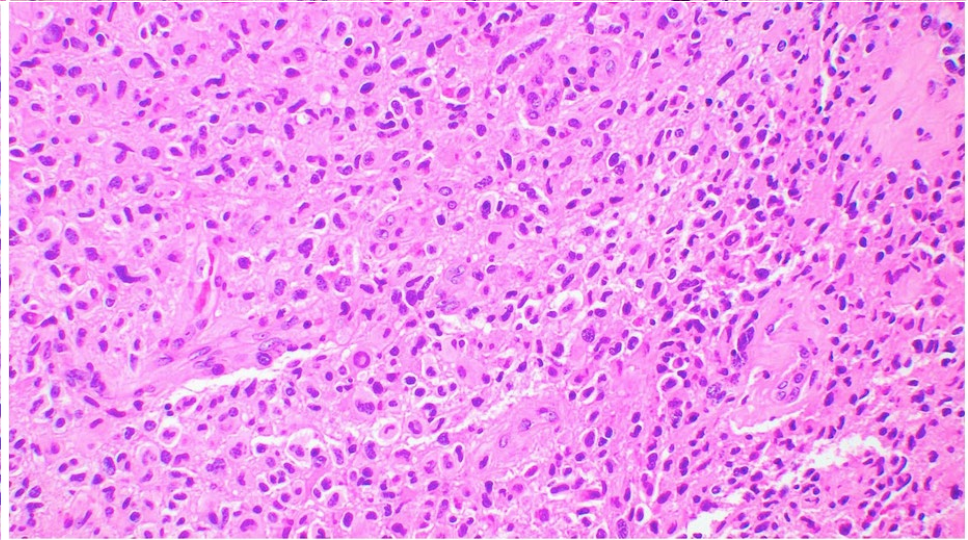
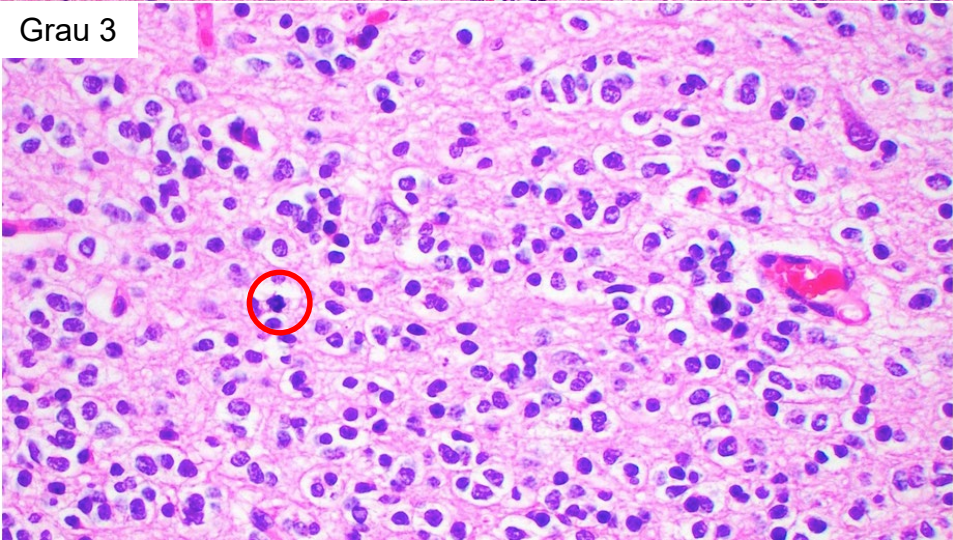
Infant-type hemispheric glioma

Louis DN, Perry A, Wesseling P, Brat DJ, Cree IA, Figarella-Branger D, Hawkins C, Ng HK, Pfister SM, Reifenberger G, Soffiotti R, von Deimling A, Ellison DW. The 2021 WHO Classification of Tumors of the Central Nervous System: a summary. *Neuro Oncol.* 2021 Aug 2;23(8):1231-1251. doi: 10.1093/neuonc/noab106. PMID: 34185076; PMCID: PMC8328013.

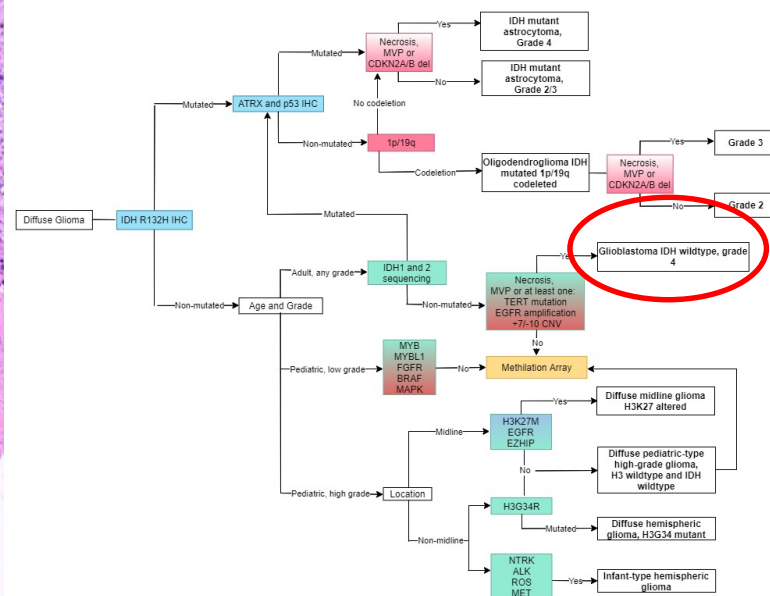
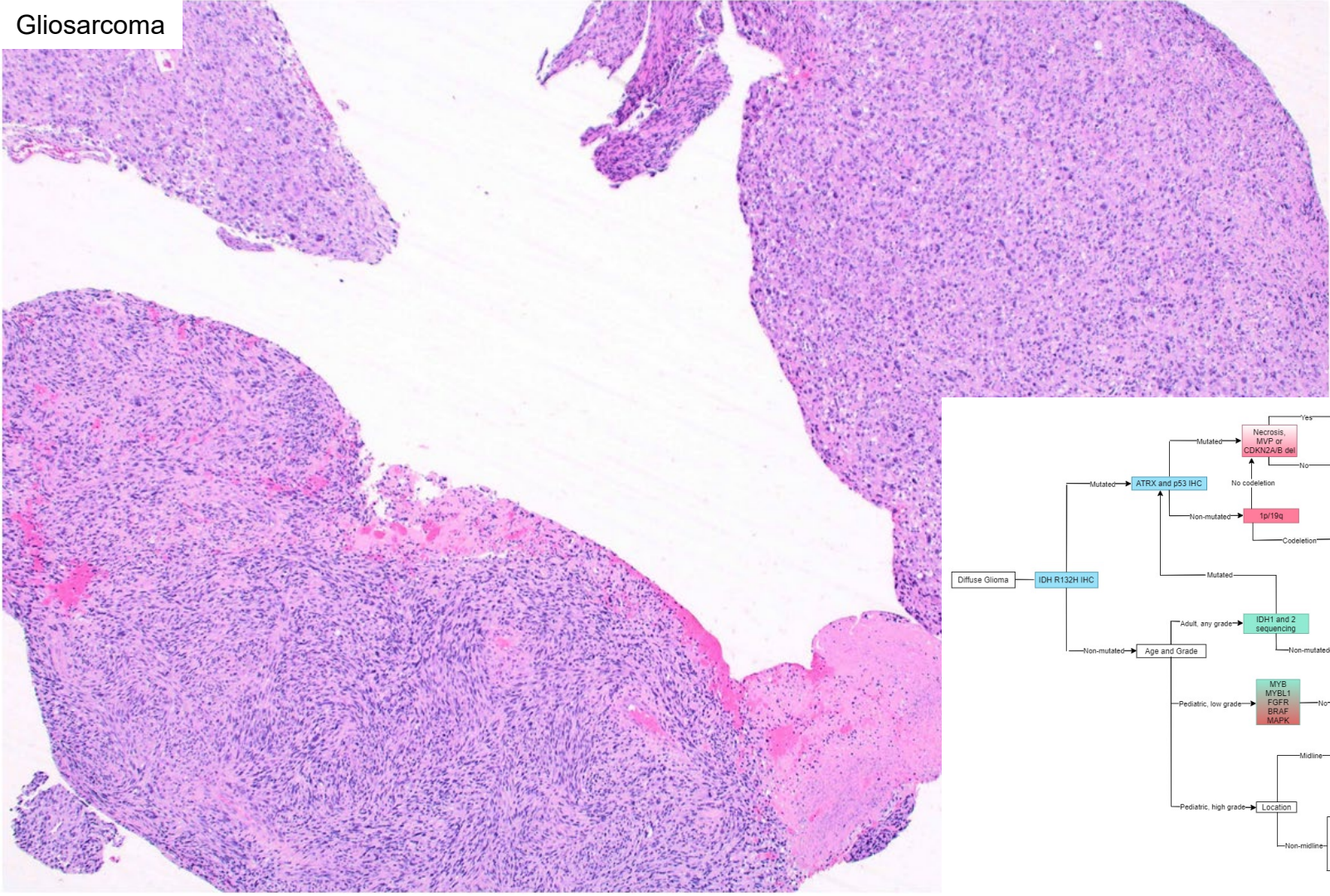
Grau 2



Grau 3



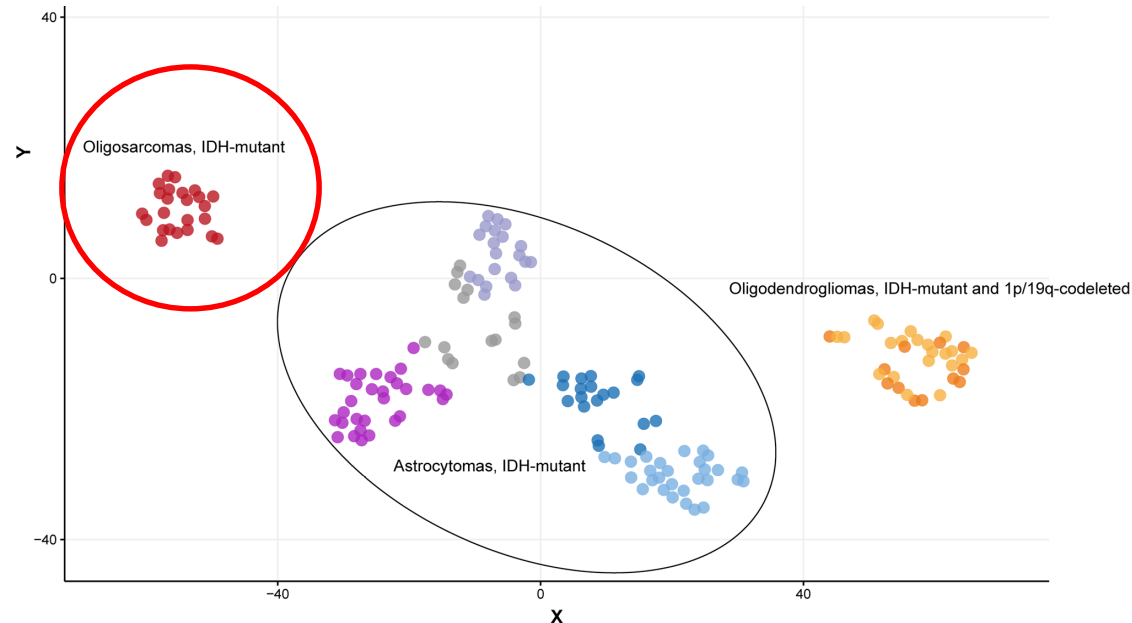
Gliosarcoma





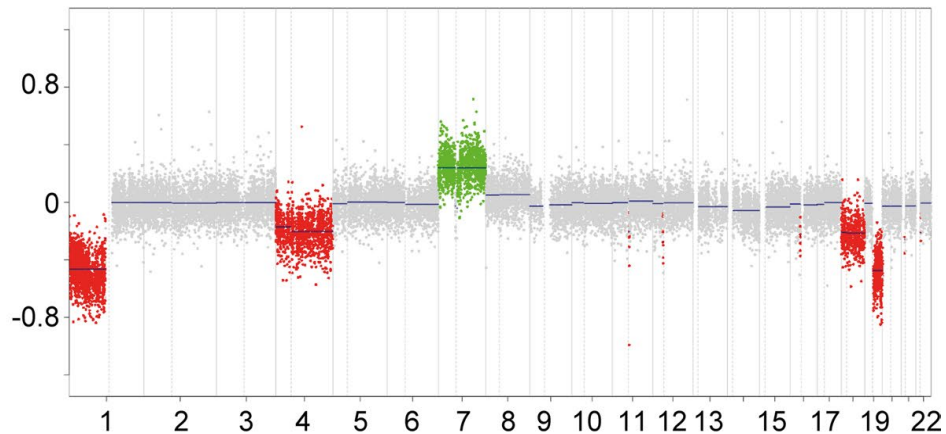
Oligosarcomas, IDH-mutant are distinct and aggressive

Abigail K. Suwala^{1,2,3} · Marius Felix^{1,2} · Dennis Friedel^{1,2} · Damian Stichel^{1,2} · Daniel Schrimpf^{1,2} · Felix Hinz^{1,2} · Ekkehard Hewer⁴ · Leonille Schweizer^{5,6} · Hildegard Dohmen⁷ · Ute Pohl⁸ · Ori Staszewski⁹ · Andrey Korshunov^{1,2} · Marco Stein¹⁰ · Thidathip Wongsurawat¹¹ · Pornsuk Cheunsuacchon¹¹ · Sith Sathornsumetee¹¹ · Christian Koelsche¹² · Clinton Turner^{13,14} · Emilie Le Rhun^{15,16} · Angelika Mühlebner¹⁷ · Philippe Schuch¹⁸ · Koray Özdoğan¹⁹ · Takahiro Ono²⁰ · Hiroaki Shimizu²⁰ · Marco Prinz^{9,21,22} · Till Acker⁷ · Christel Herold-Mende²³ · Tobias Kessler^{24,25} · Wolfgang Wick^{24,25} · David Capper^{5,6} · Pieter Wesseling^{26,27} · Felix Sahm^{1,2,28} · Andreas von Deimling^{1,2} · Christian Hartmann²⁹ · David E. Reuss^{1,2} 



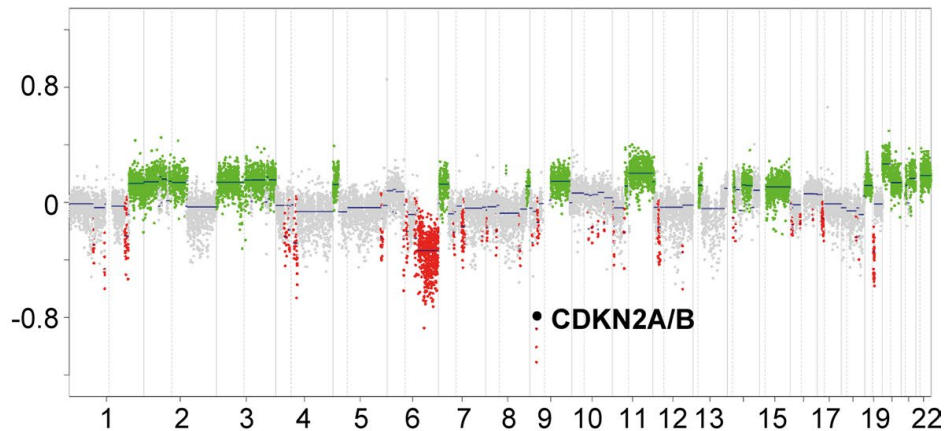
a

Primary tumor



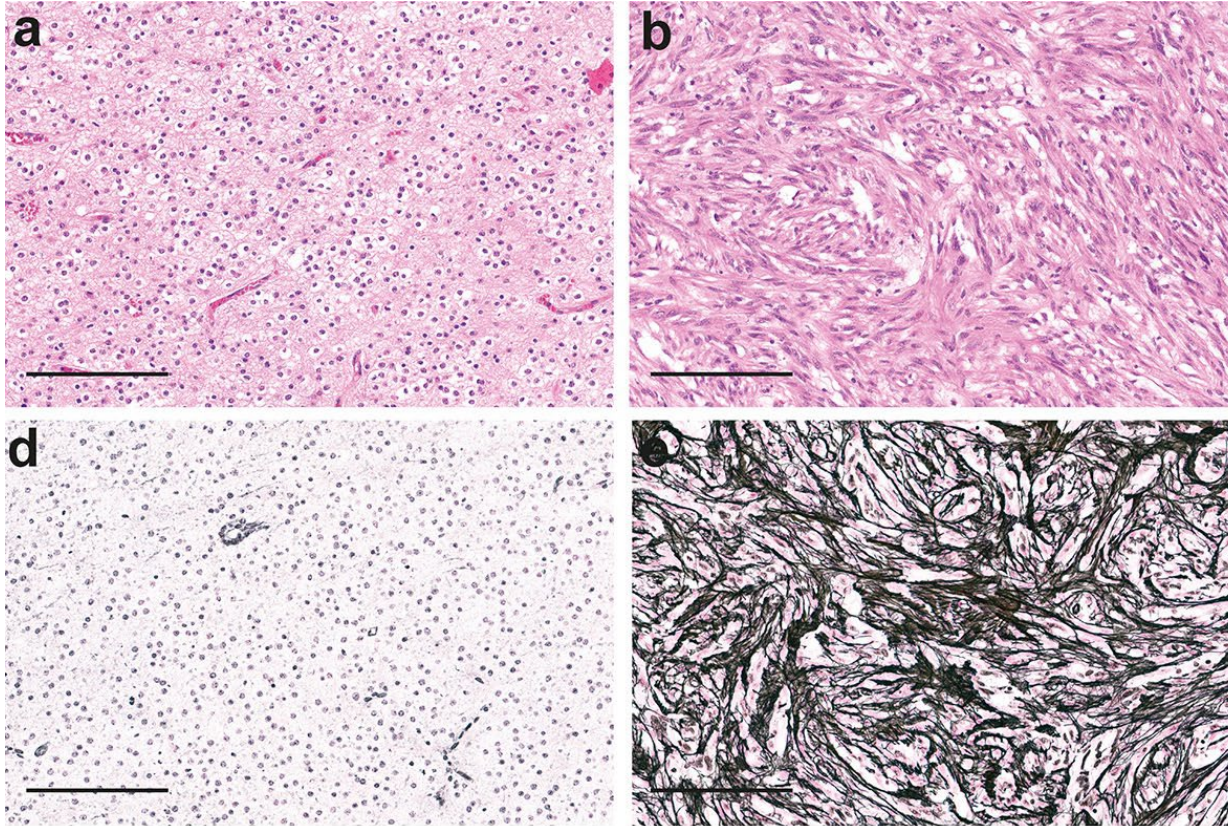
b

Oligosarcoma

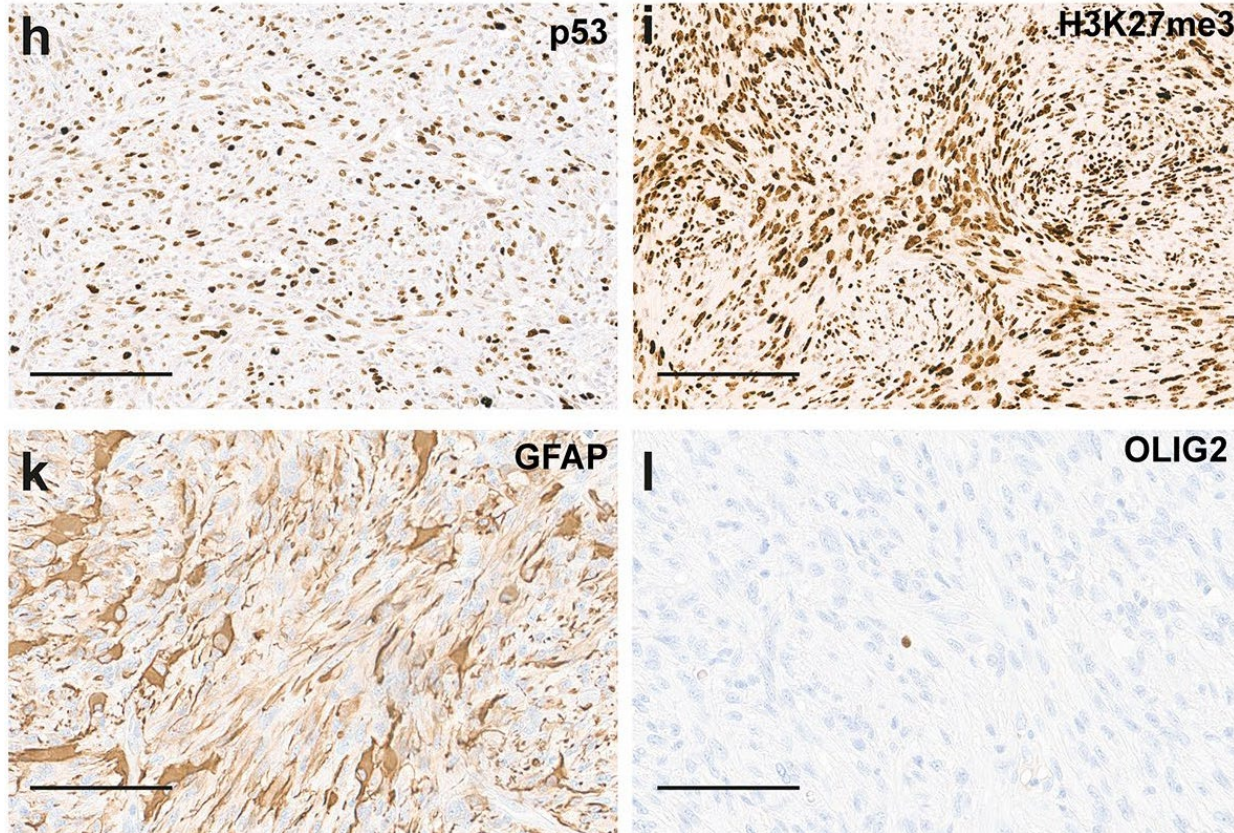


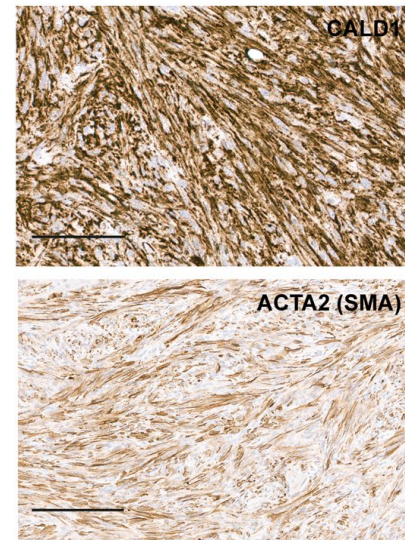
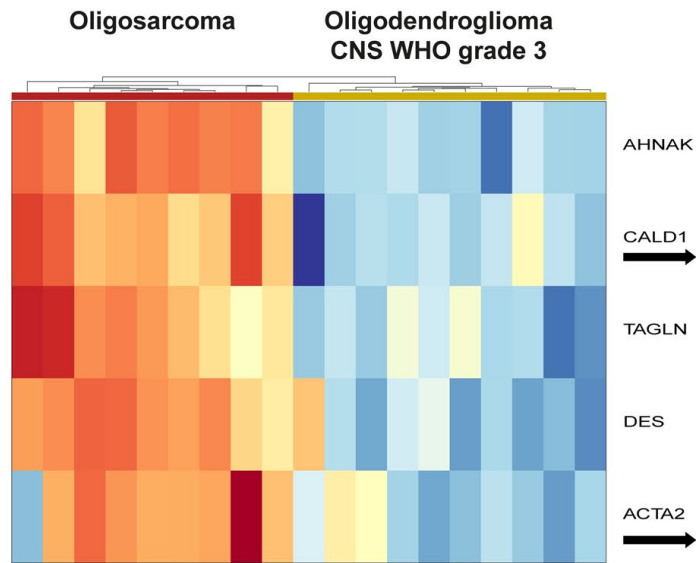
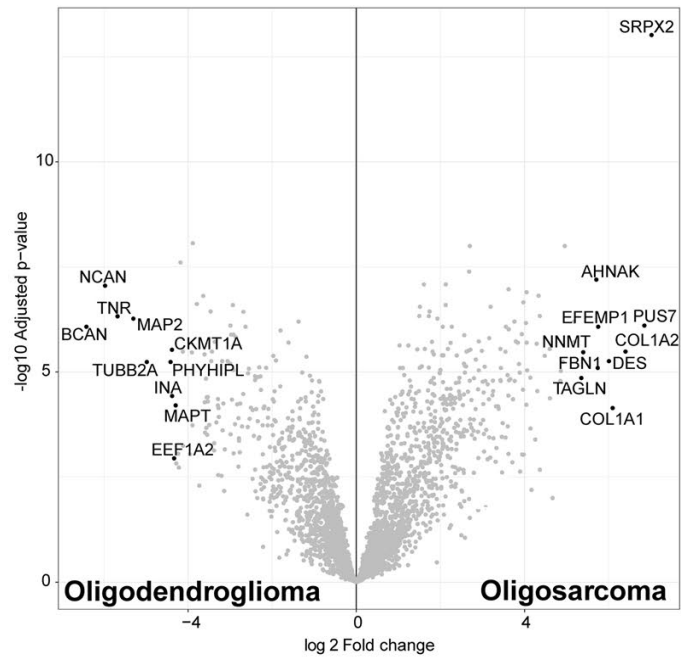
- Codeleció 1p19q no necessària
- Altres mutacions:
 - CDKN2A
 - Promotor TERT

OLIGOSARCOMES

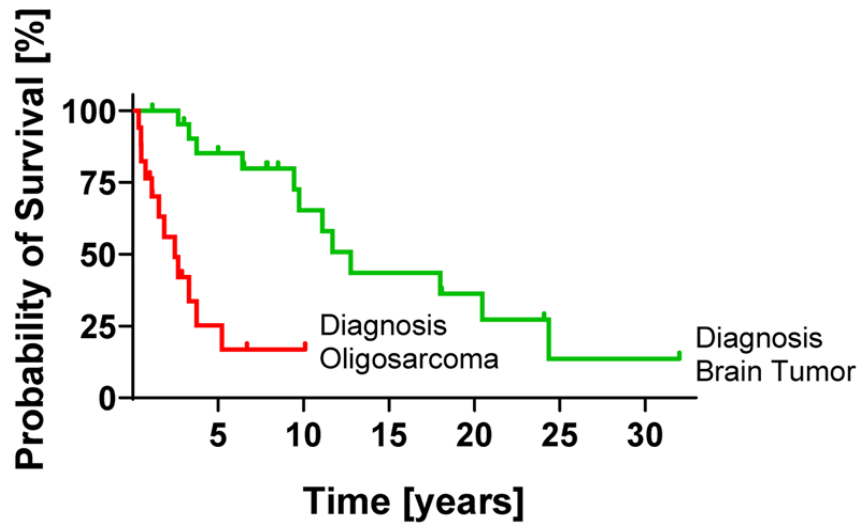


OLIGOSARCOMES



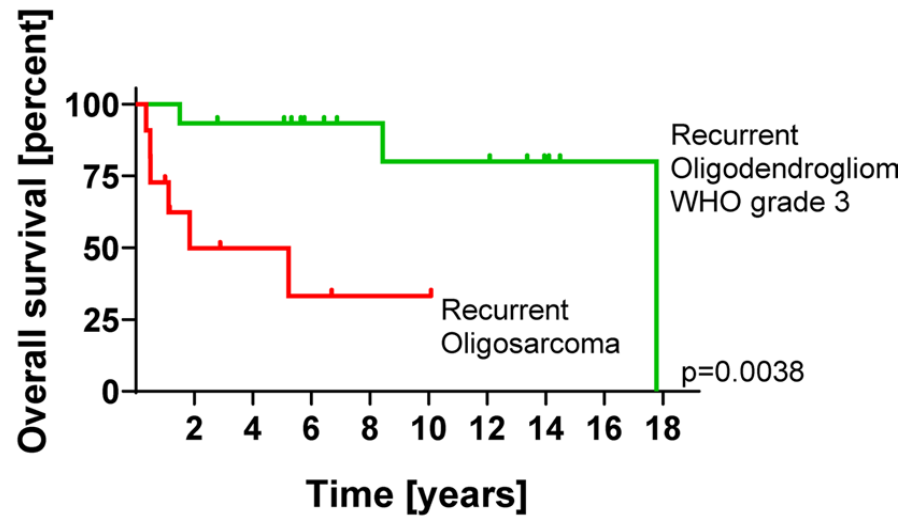


Oligosarcoma



No. at risk

■	17	3	1	0	0	0	0
■	22	17	9	6	4	1	1



No. at risk

■	11	4	3	2	1	0	0	0	0
■	15	14	13	10	8	6	6	3	1

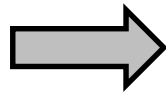
HISTORIA CLÍNICA

2020

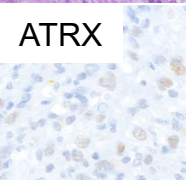
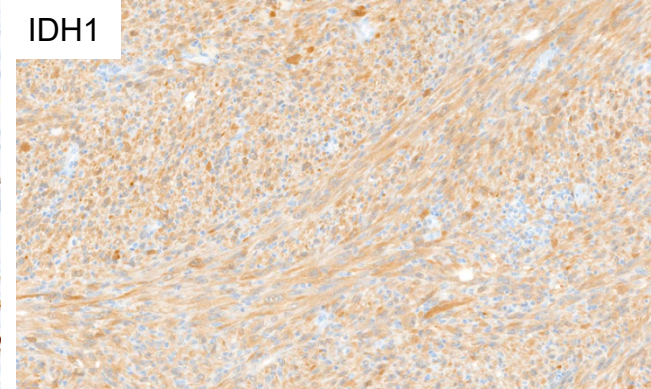
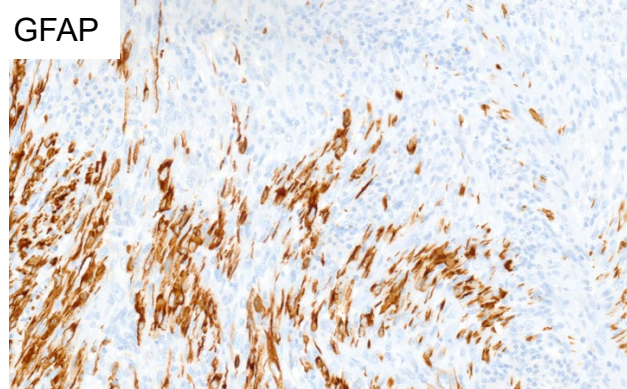
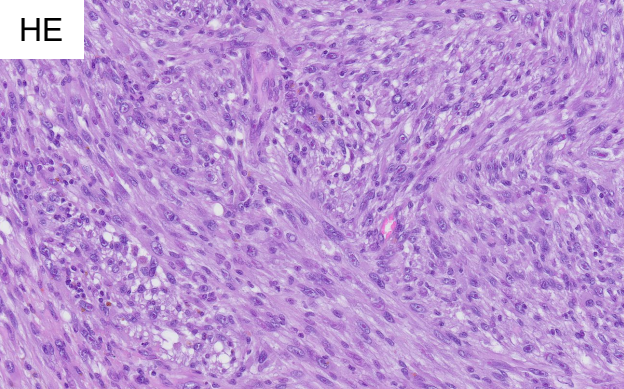
RM:



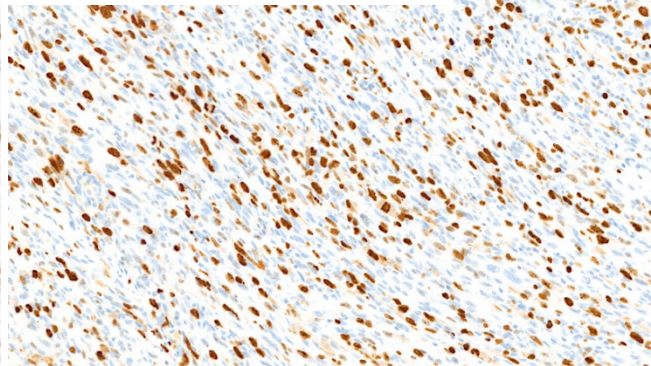
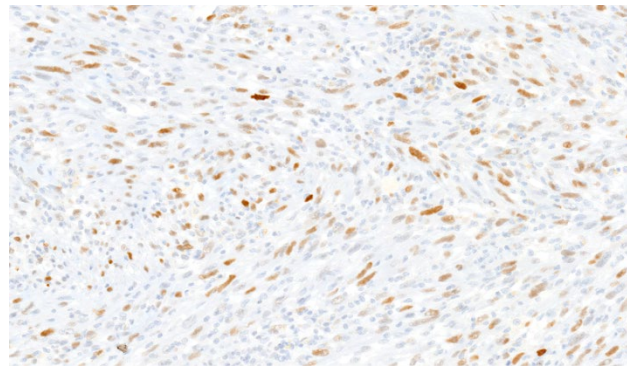
Progressió amb captació als marges de la cavitat quirúrgica frontal



Quimioteràpia + Resecció

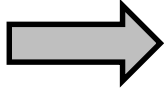


**Glioma d'alt grau amb mutació IDH1
compatible amb recidiva
d'oligodendroglioma anaplàsic**



HISTORIA CLÍNICA

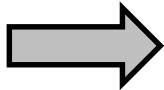
2021



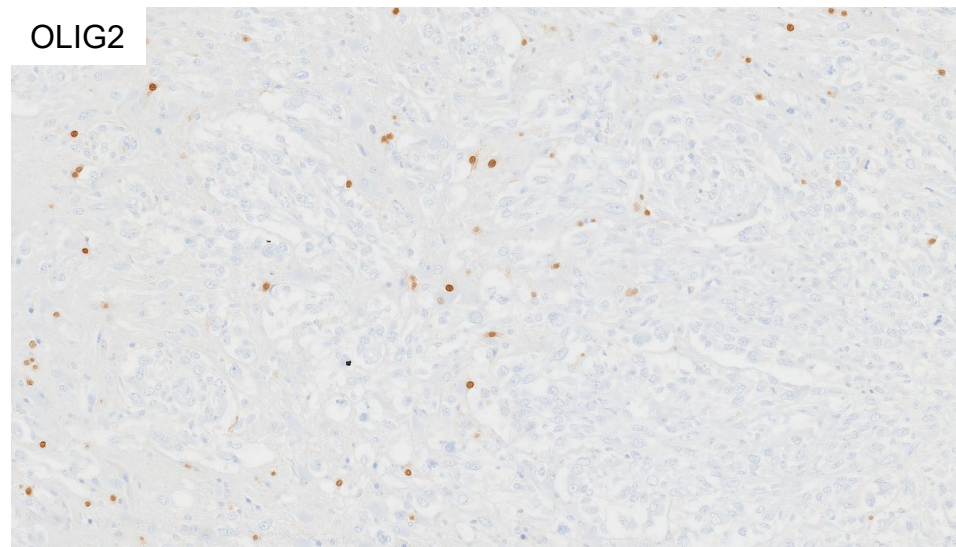
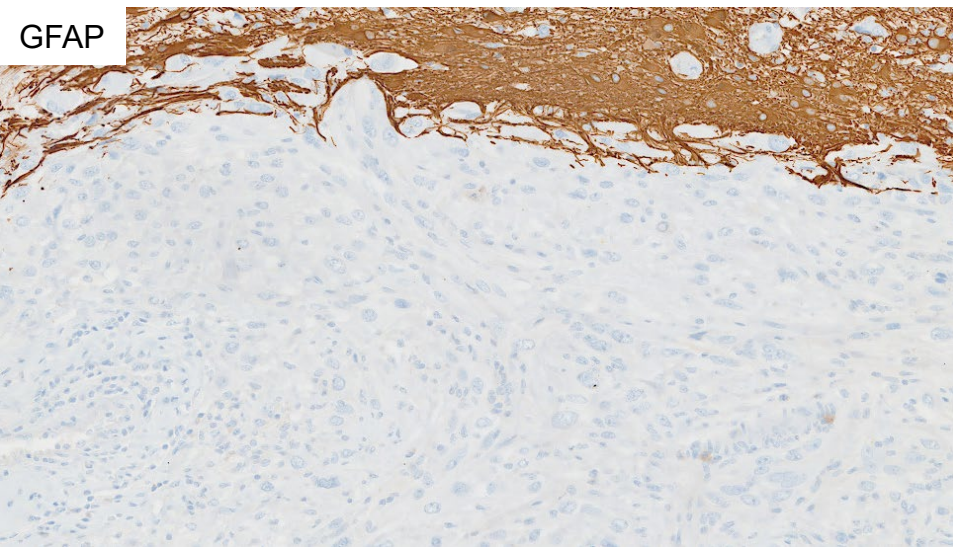
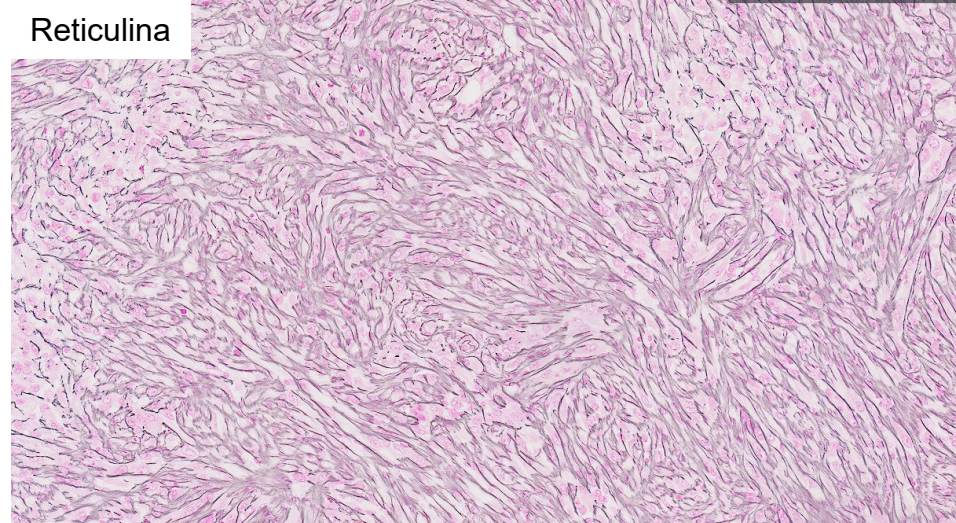
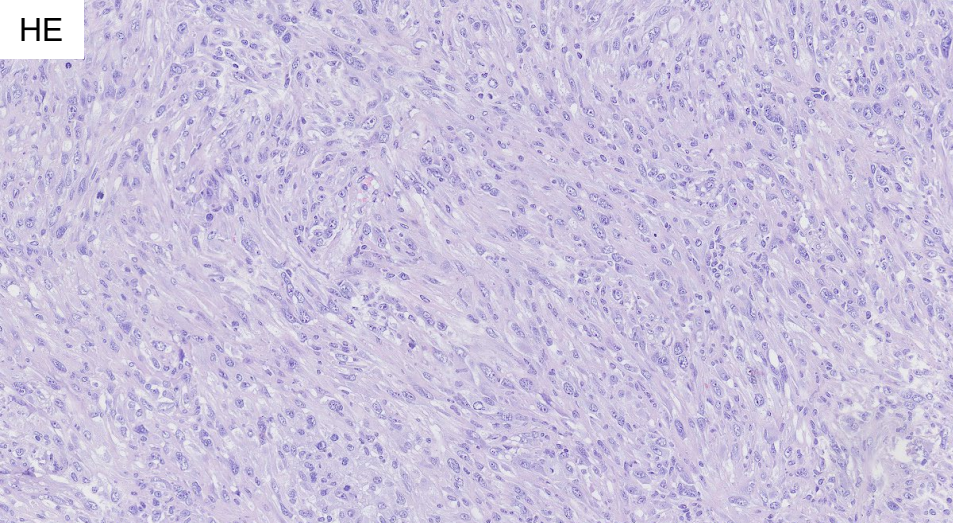
Quimioteràpia + Bevacizumab

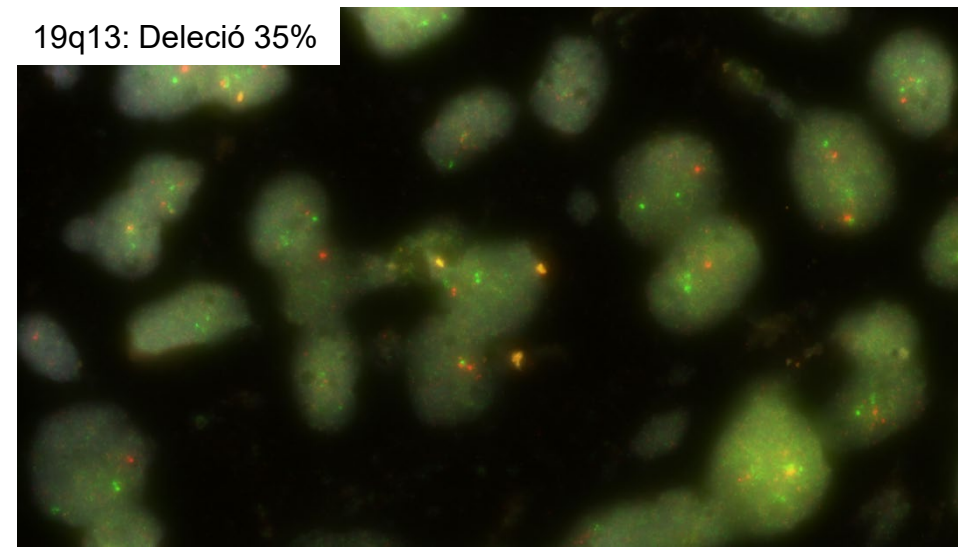
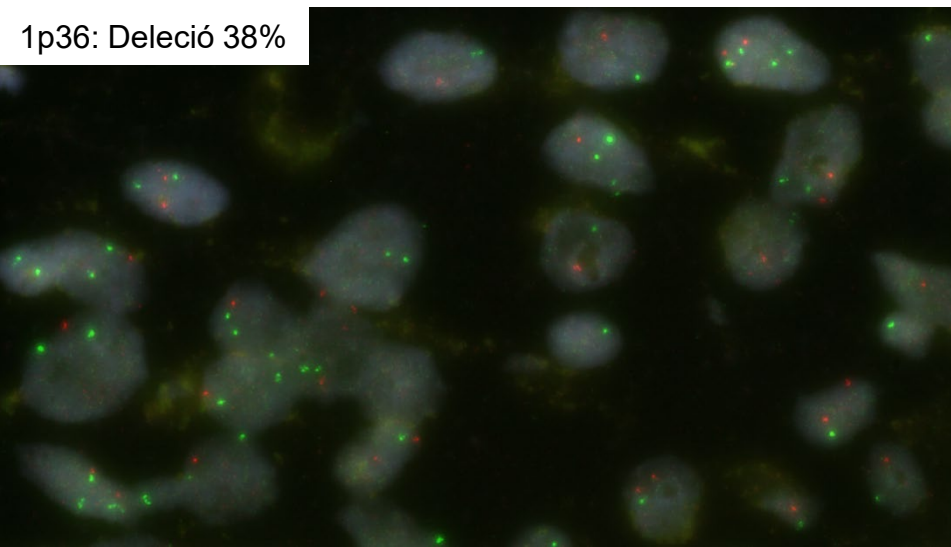
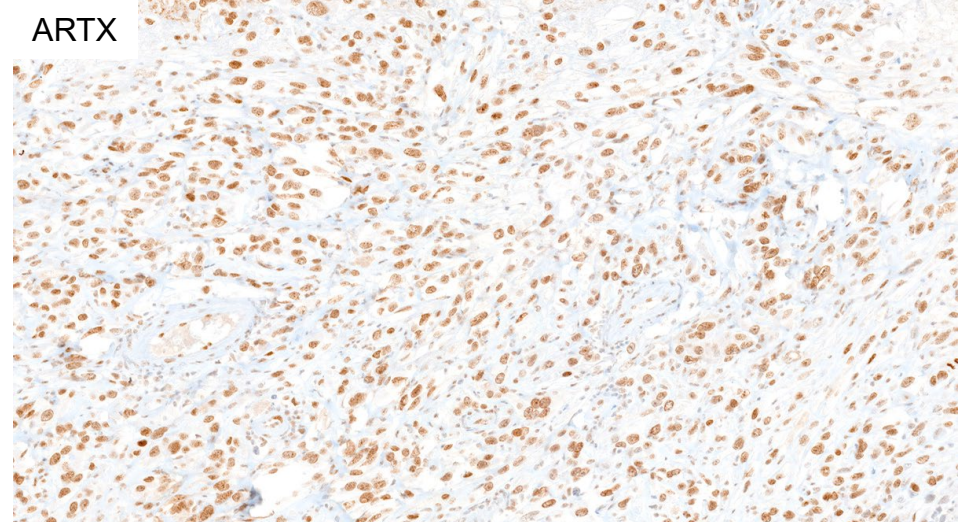
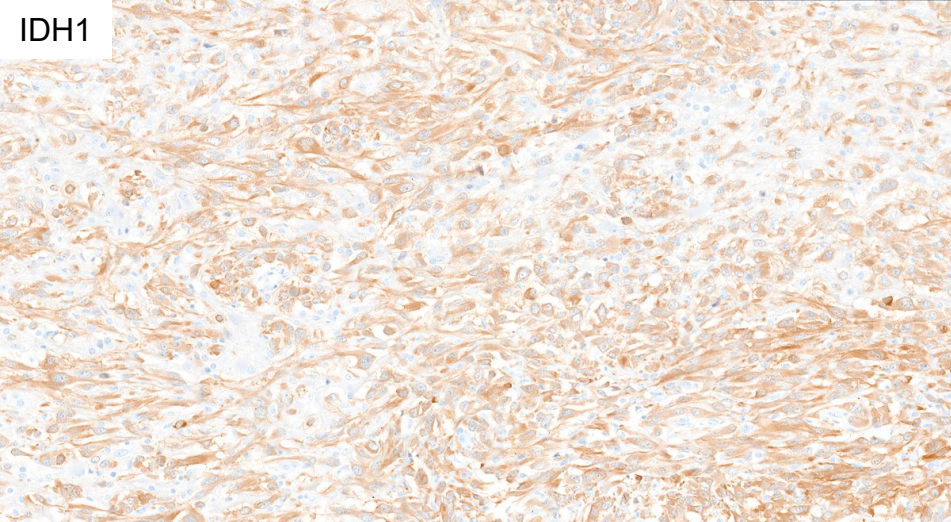
2022

RM: Progressió tumoral amb aparició de nòduls



Resecció





TAKE HOME MESSAGES

- Els oligosarcomes són una entitat diferent dins les gliomes IDH-mutants
- La codeleció 1p19q no és un requisit pel diagnòstic dels oligosarcomes
- No tots els gliomes amb mutació d'IDH sense mutació d'ATRX ni codelecció 1p19q són astrocitomes
- La història clínica i la imatge per ressonància magnètica són fundamentals pel diagnòstic

Moltes gràcies