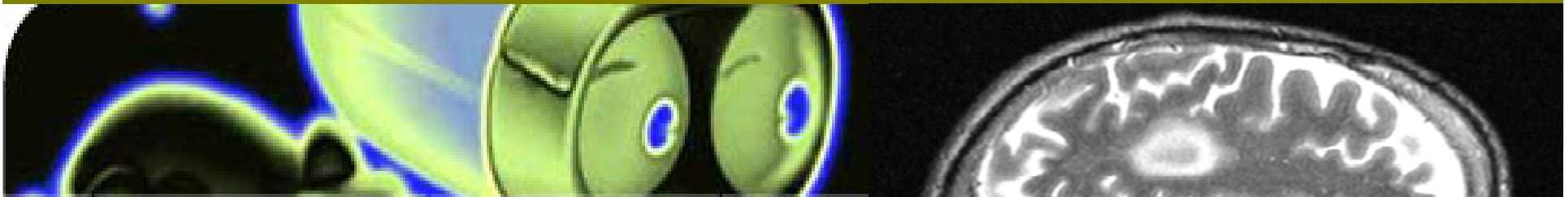


Alfredo Vellido : www.lsi.upc.edu/~avellido

AIDTumour

www.lsi.upc.edu/~websoco/AIDTumour



• Hay más de 100 tipos de tumores cerebrales ...

WHO Classification of Tumours of the Nervous System



TUMOURS OF NEUROEPITHELIAL TISSUE

Astrocytic tumours

Diffuse astrocytoma	9400/3 ¹
Fibrillary astrocytoma	9420/3
Protoplasmic astrocytoma	9410/3
Gemistocytic astrocytoma	9411/3
Anaplastic astrocytoma	9401/3
Glioblastoma	9440/3
Giant cell glioblastoma	9441/3
Gliosarcoma	9442/3
Pilocytic astrocytoma	9421/1
Pleomorphic xanthoastrocytoma	9424/3
Subependymal giant cell astrocytoma	9384/1

Oligodendroglial tumours

Oligodendroglioma	9450/3
Anaplastic oligodendroglioma	9451/3

Mixed gliomas

Oligoastrocytoma	9382/3
Anaplastic oligoastrocytoma	9382/3 ²

Ependymal tumours

Ependymoma	9391/3
Cellular	9391/3
Papillary	9393/3
Clear cell	9391/3
Tanycytic	9391/3
Anaplastic ependymoma	9392/3
Myxopapillary ependymoma	9394/1
Subependymoma	9383/1

Choroid plexus tumours

Choroid plexus papilloma	9390/0
Choroid plexus carcinoma	9390/3

Glial tumours of uncertain origin

Astroblastoma	9430/3
Gliomatosis cerebri	9381/3
Chordoid glioma of the 3 rd ventricle	9444/1

Neuronal and mixed neuronal-glioma tumours

Gangliocytoma	9492/0
Dysplastic gangliocytoma of cerebellum (Lhermitte-Duclos)	9493/0
Desmoplastic infantile astrocytoma / ganglioglioma	9412/1
Intraneural perineurioma	9413/0
Dysembryoplastic neuroepithelial tumour	9413/0
Ganglioglioma	9505/1
Anaplastic ganglioglioma	9505/3
Central neurocytoma	9506/1
Cerebellar liponeurocytoma	9506/1
Paraganglioma of the filum terminale	8680/1

Neuroblastic tumours

Olfactory neuroblastoma (Aesthesioneuroblastoma)	9522/3
Olfactory neuroepithelioma	9523/3
Neuroblastomas of the adrenal gland and sympathetic nervous system	9500/3

Pineal parenchymal tumours

Pineocytoma	9361/1
Pineoblastoma	9362/3
Pineal parenchymal tumour of intermediate differentiation	9362/3

Embryonal tumours

Medulloepithelioma	9501/3
Ependymblastoma	9392/3
Medulloblastoma	9470/3
Desmoplastic medulloblastoma	9471/3
Large cell medulloblastoma	9474/3
Medulloblastoma	9472/3
Melanotic medulloblastoma	9470/3
Supratentorial primitive neuroectodermal tumour (PNET)	9473/3
Neuroblastoma	9500/3
Ganglioneuroblastoma	9490/3
Atypical teratoid/rhabdoid tumour	9508/3

TUMOURS OF PERIPHERAL NERVES

Schwannoma

(Neurilemmoma, Neurinoma)	9560/0
Cellular	9560/0
Plexiform	9560/0
Melanotic	9560/0

Neurofibroma

Plexiform	9550/0
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Perineurioma

Intraneural perineurioma	9571/0
Soft tissue perineurioma	9571/0

Malignant peripheral nerve sheath tumour (MPNST)

Epithelioid	9540/3
MPNST with divergent mesenchymal and / or epithelial differentiation	9540/3
Melanotic	9540/3
Melanotic psammomatous	9540/3

TUMOURS OF THE MENINGES

Tumours of meningeothelial cells

Meningioma	9530/0
Meningothelial	9531/0
Fibrous (fibroblastic)	9532/0
Transitional (mixed)	9537/0
Psammomatous	9533/0
Angiomatous	9534/0
Microcystic	9530/0
Secretory	9530/0
Lymphoplasmacyte-rich	9530/0
Metaplastic	9530/0
Clear cell	9538/1
Chordoid	9538/1
Atypical	9539/1
Papillary	9538/3
Rhabdoid	9538/3
Anaplastic meningioma	9530/3

Mesenchymal, non-meningothelial tumours

Lipoma	8850/0
Angiolipoma	8861/0
Hibernoma	8880/0
Liposarcoma (intracranial)	8850/3
Solitary fibrous tumour	8815/0
Fibrosarcoma	8810/3
Malignant fibrous histiocytoma	8830/3
Leiomyoma	8890/0
Leiomyosarcoma	8890/3
Rhabdomyoma	8900/0
Rhabdomyosarcoma	8900/3
Chondroma	9220/0

Chondrosarcoma	9220/3
Osteoma	9180/0
Osteosarcoma	9180/3
Osteochondroma	9210/0
Haemangioma	9120/0
Epithelioid haemangioendothelioma	9133/1
Haemangiopericytoma	9150/1
Angiosarcoma	9120/3
Kaposi sarcoma	9140/3

Primary melanocytic lesions

Diffuse melanocytosis	8728/0
Melanocytoma	8728/1
Malignant melanoma	8720/3
Meningeal melanomatosis	8728/3

Tumours of uncertain histogenesis

Haemangioblastoma	9161/1
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LYMPHOMAS AND HAEMOPOIETIC NEOPLASMS

Malignant lymphomas	9590/3
Plasmacytoma	9731/3
Granulocytic sarcoma	9930/3

GERM CELL TUMOURS

Germinoma	9064/3
Embryonal carcinoma	9070/3
Yolk sac tumour	9071/3
Choriocarcinoma	9100/3
Teratoma	9080/1
Mature	9080/0
Immature	9080/3
Teratoma with malignant transformation	9084/3
Mixed germ cell tumours	9085/3

TUMOURS OF THE SELLAR REGION

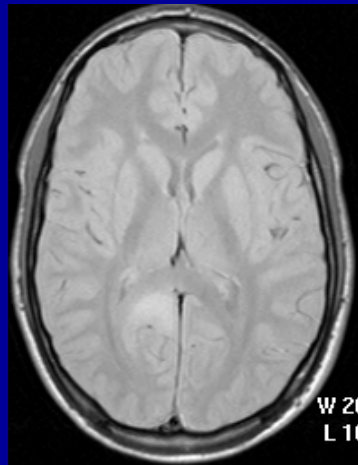
Craniopharyngioma	9350/1
Adamantinomatous	9351/1
Papillary	9352/1
Granular cell tumour	9582/0

METASTATIC TUMOURS

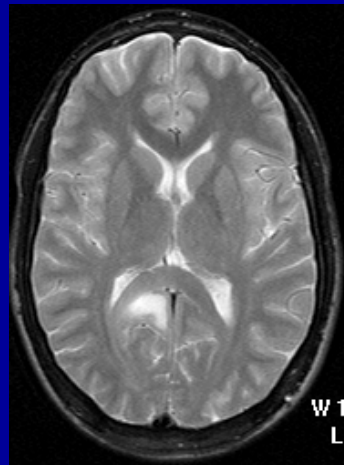
¹ Morphology code of the International Classification of Diseases for Oncology (ICD-O) and the Systematized Nomenclature of Medicine (SNOMED). Behaviour is coded /0 for benign tumours, /1 for low or uncertain malignant potential or borderline malignancy, /2 for in situ lesions and /3 for malignant tumours.

² The italicised numbers are provisional codes proposed for the third edition of ICD-O. They should, for the most part, be incorporated.

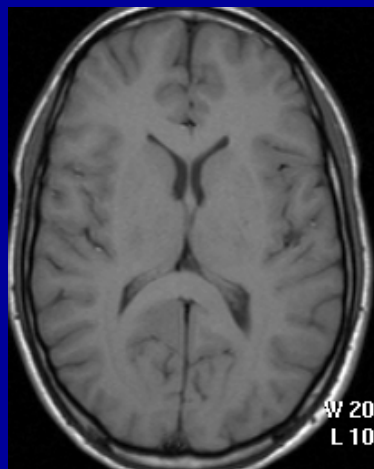
MRI puede ser IMPRECISO



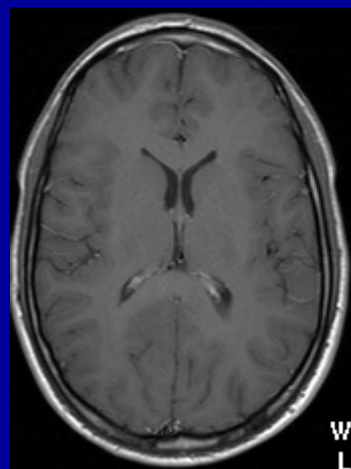
PD



T2



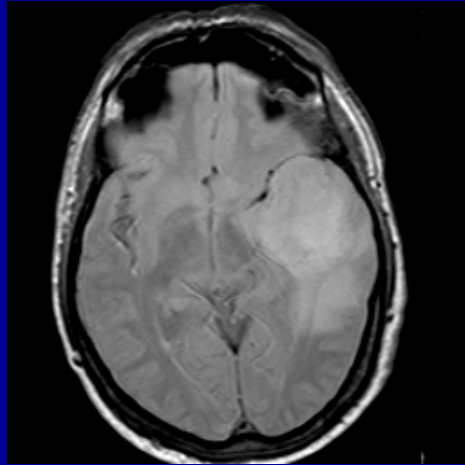
T1



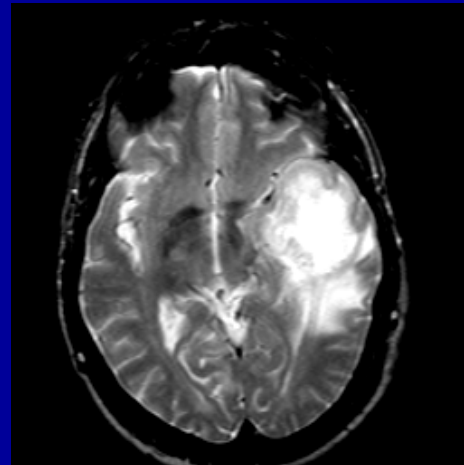
T1-Gd

- MRI clasificación:
Glial tumour
- DIAGNOSIS:
Oligodendroglioma

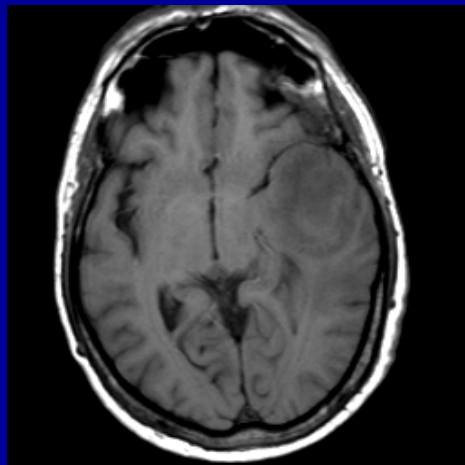
La clasificación por MRI puede ser INCORRECTA



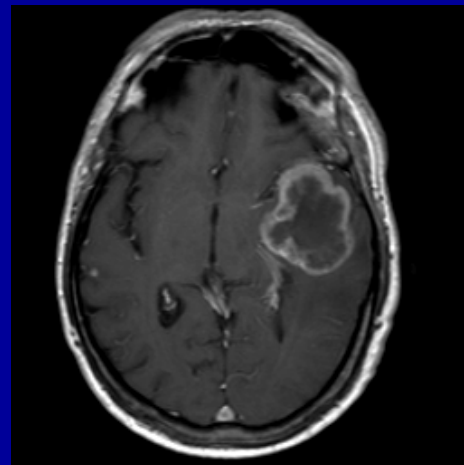
PD



T2



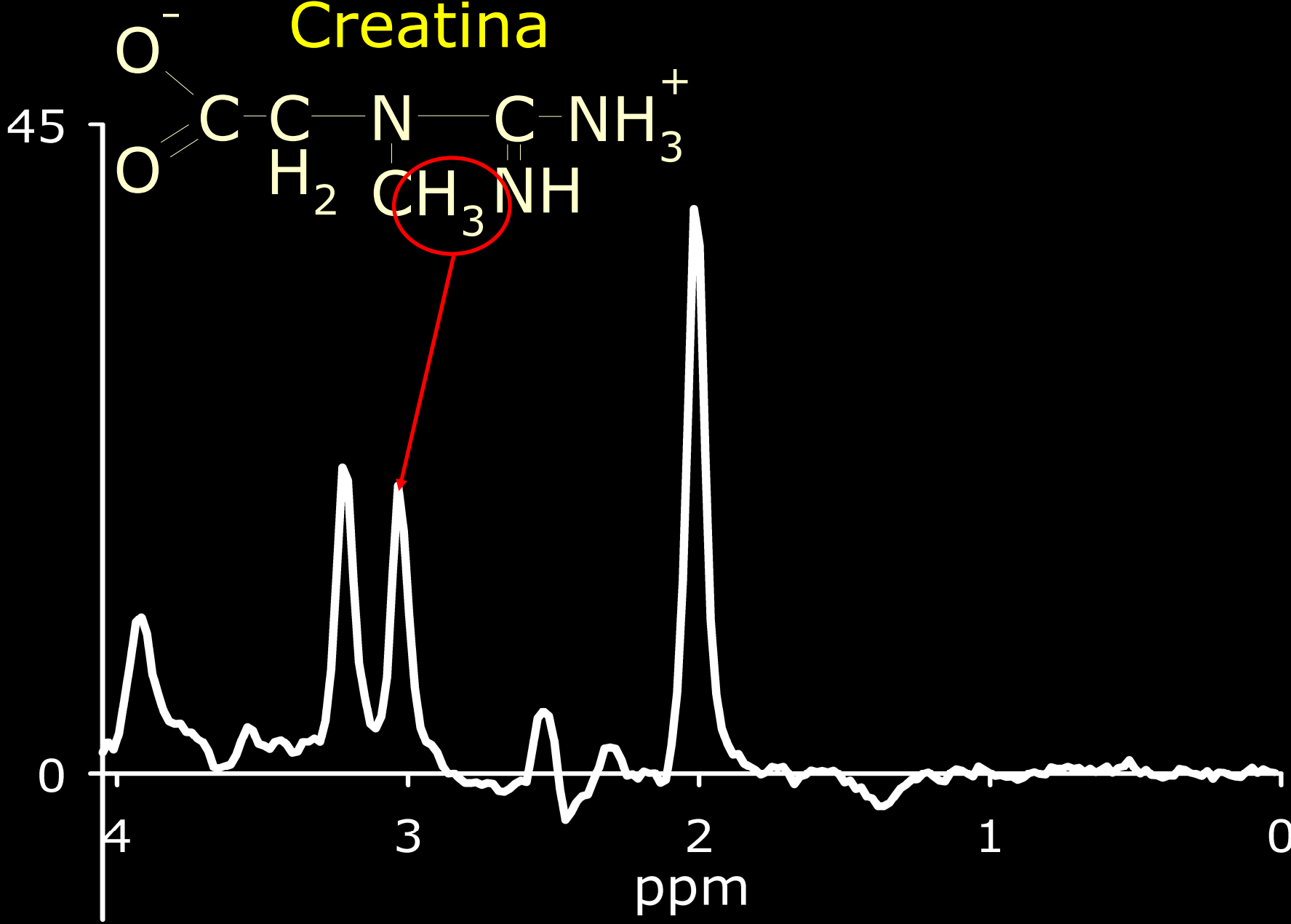
T1



T1-Gd

- MRI clasificación:
Glial tumour
- DIAGNOSIS:
Metastasis

Creatina



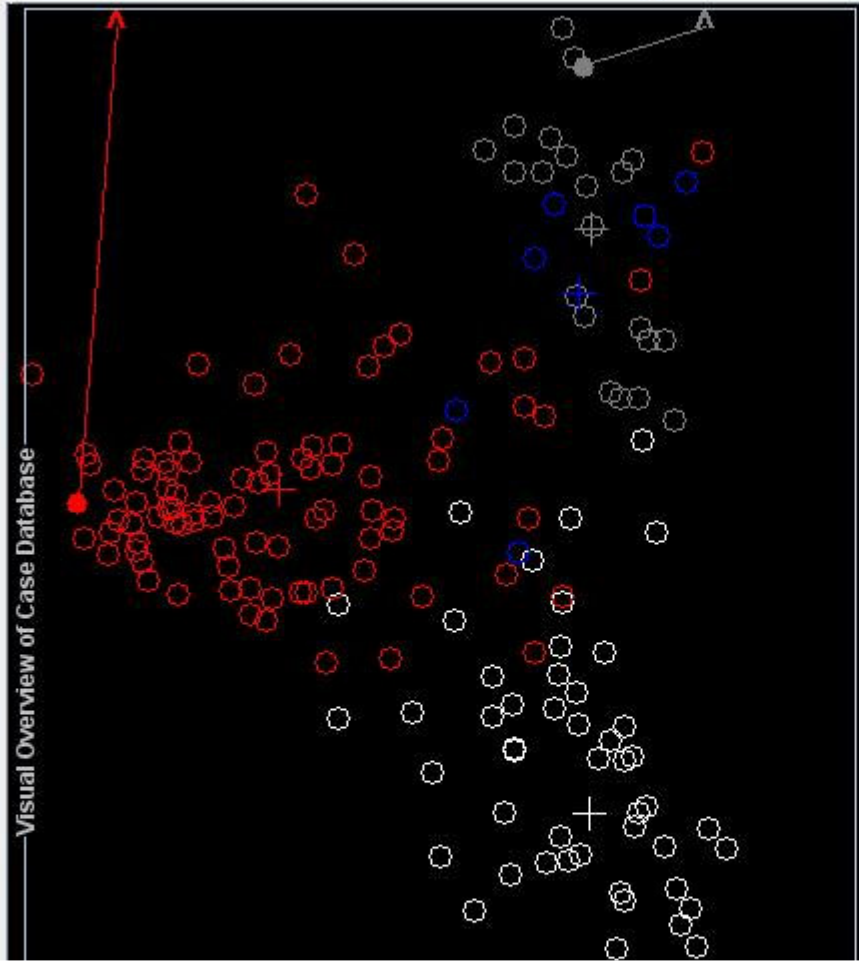
Mean spectra taken from <http://azizu.uab.es/INTERPRET>

Short

Long

Classif: LDA

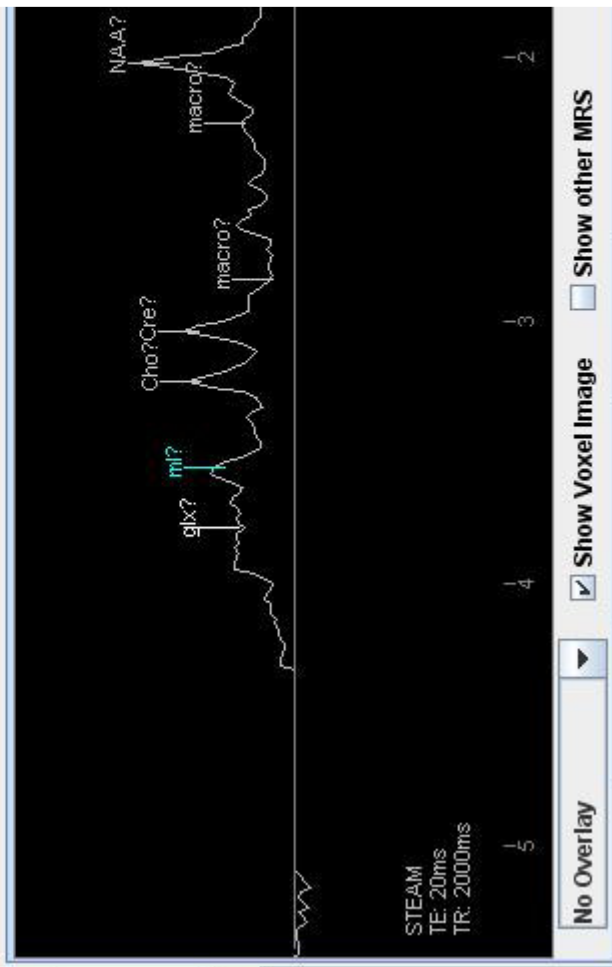
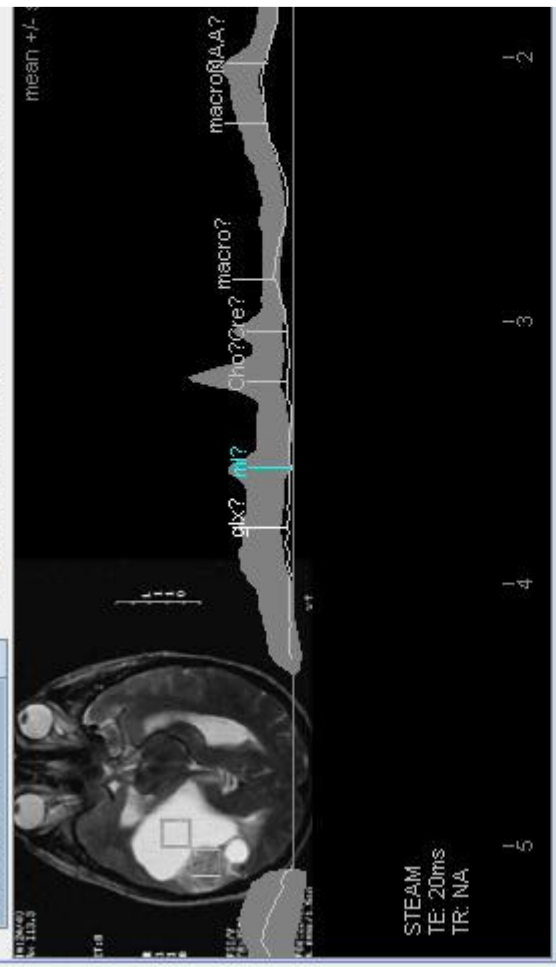
Visual Overview of Case Database



ID: I0074 Pathology: Glioblastoma

MR Spectra MR Images Clinical Record Case Notes

Glioblastoma Show Voxel Image Show other MRS



No Overlay Show Voxel Image Show other MRS

MR Spectra MR Images Clinical Record Case Notes

- Abscess
- Astrocytoma 3
- PNET
- Metastases
- Schwannoma
- Pilocytic Astro
- Glioblastoma
- Lymphoma
- Oligoastrocytoma
- Rare Tumor

Aportaciones diferenciales de AIDTumour

- **Diagnosis robusta**
- **Visualización avanzada**
- **Detección de casos atípicos**
- **Selección de metabolitos relevantes**
- **Definición de reglas de caracterización de tumores**