

Atlas for ACNS1821

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DMG/HGG, brain

GTV1 = all tissues initially involved with disease, and the entire residual tumour (enhancing and non-enhancing)

CTV1 = 1-1.5 cm expansion on **GTV1**

1 cm expansion is recommended

A 1.5 cm expansion is appropriate when **GTV1** is in close proximity to a major white matter tract and this area is at increased risk

GTV2 = only the area of residual disease based on post-operative MRI scans (enhancing and non-enhancing)

Not defined for cases that are completely resected

Should exclude regions of residual tumour within 5 mm to brainstem or optic chiasm

CTV2 = 0.5-1 cm expansion on **GTV2**; should exclude regions of residual tumour within 5 mm to brainstem or optic chiasm

Not defined for cases that are completely resected

When **GTV2** is not adjacent to major white matter tracts, a 0.5 cm expansion is recommended

For disease abutting major white matter tracts, a 1 cm expansion may be appropriate (i.e. along corpus callosum)

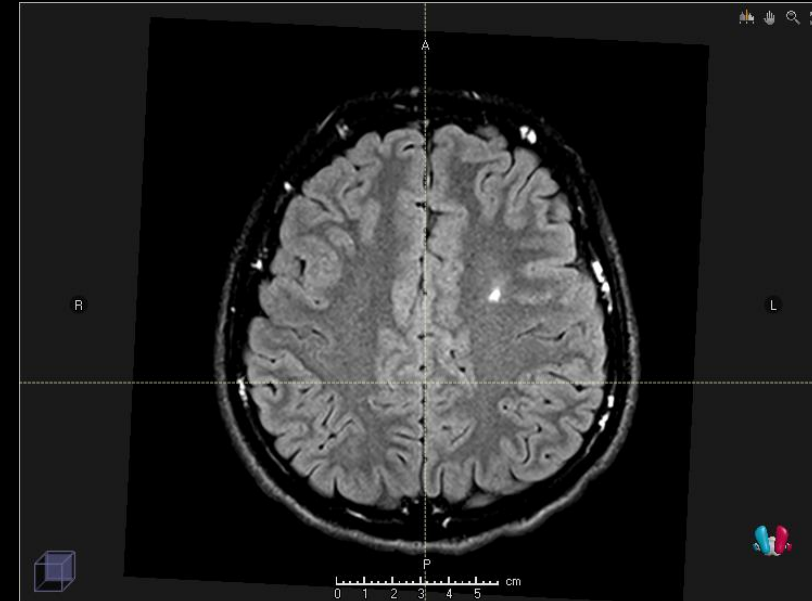
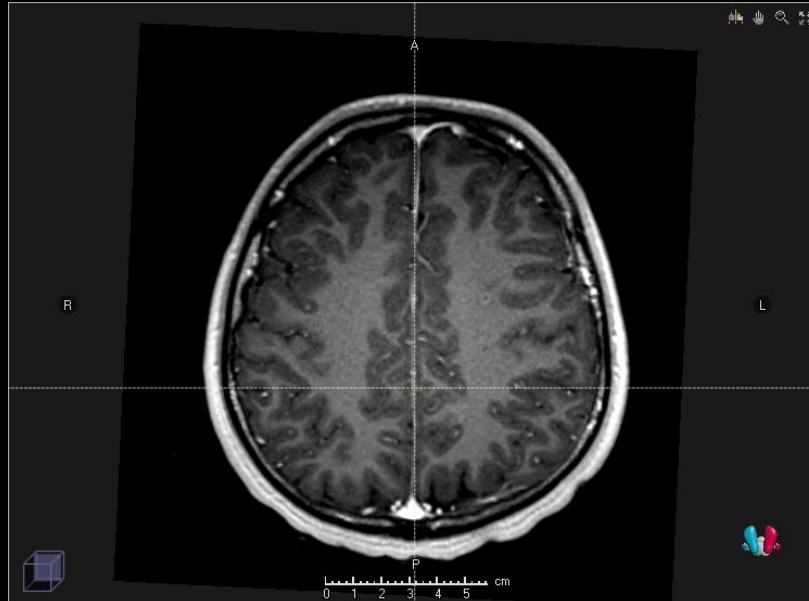
AXIAL

CT

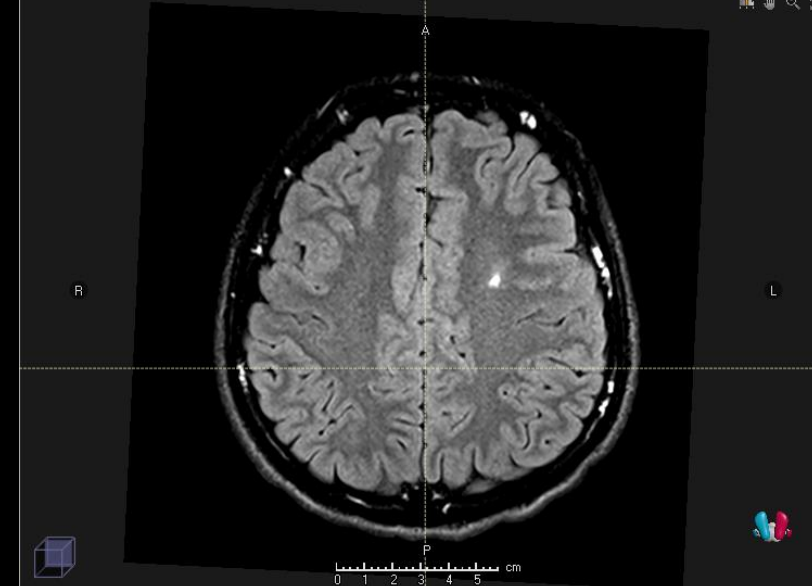
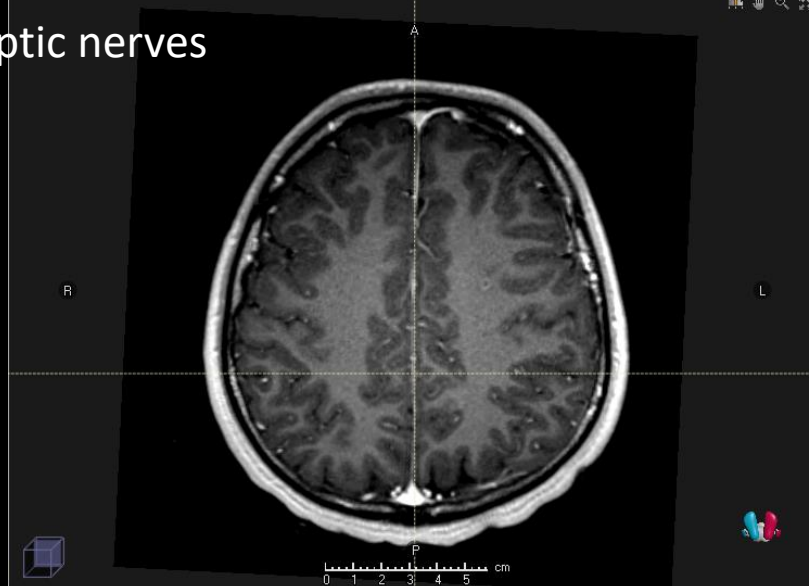
MR T1+gad

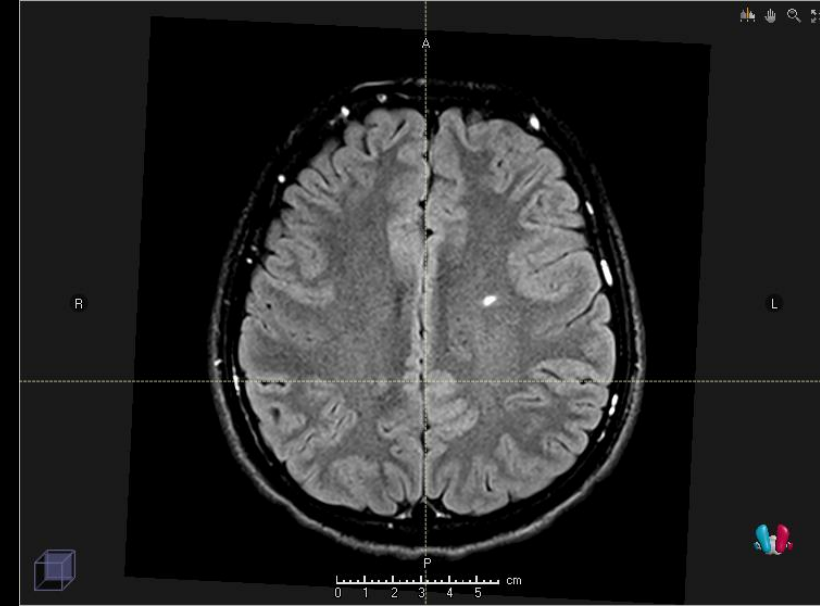
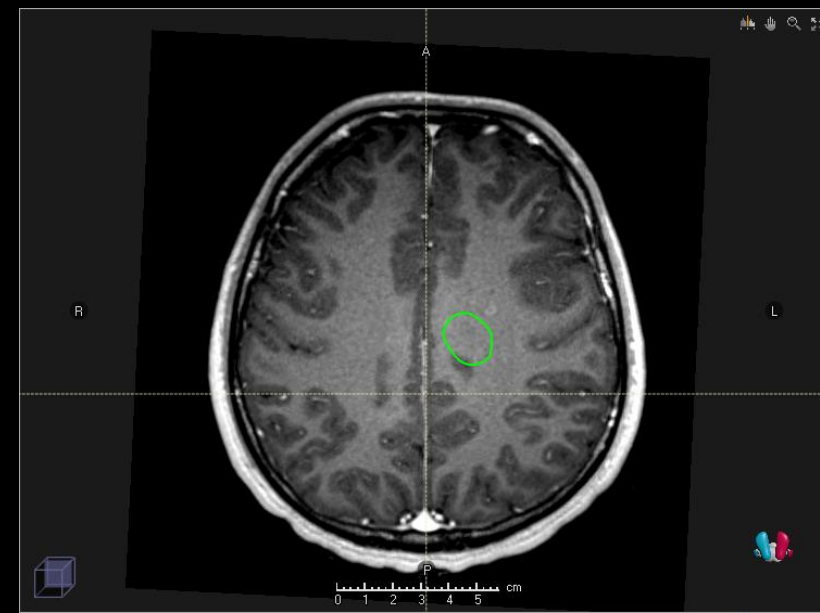
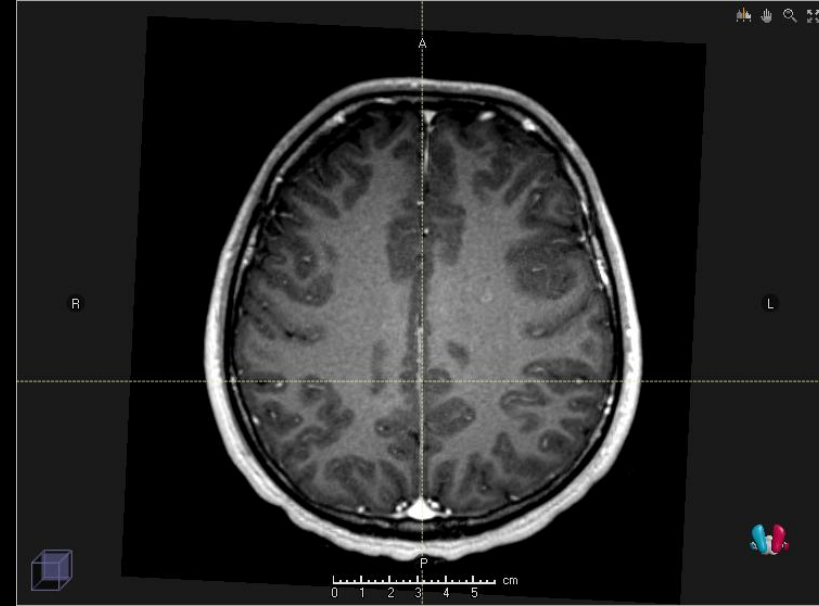
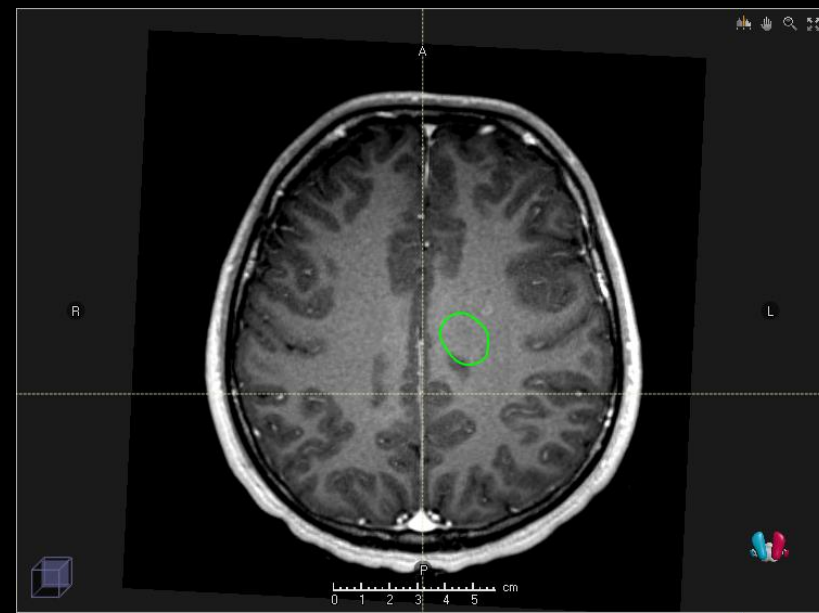
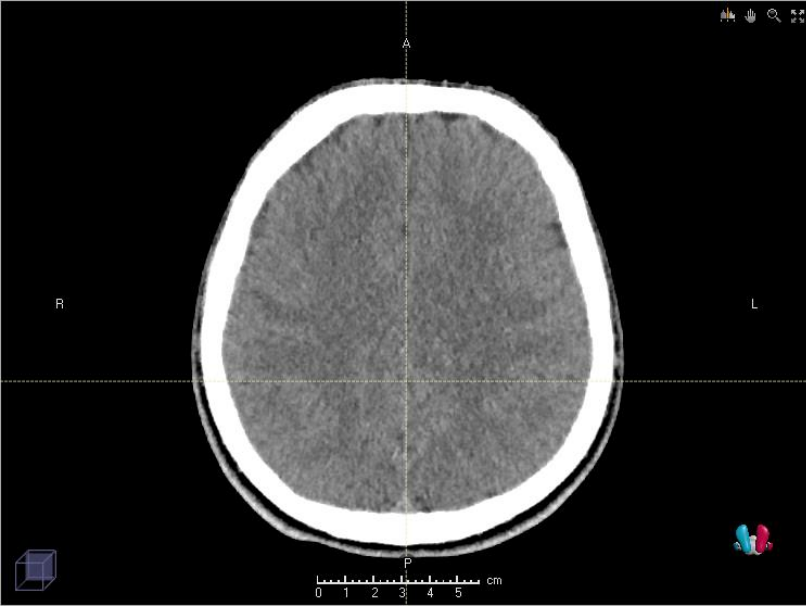
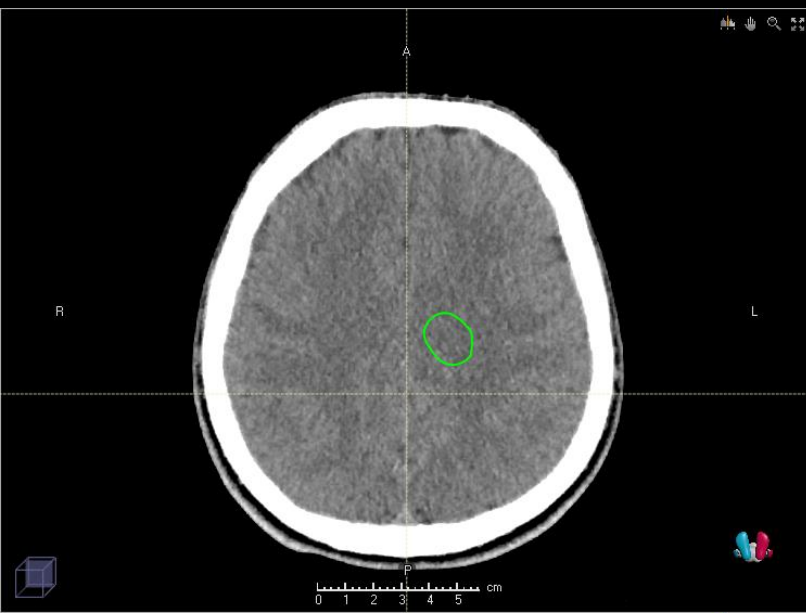
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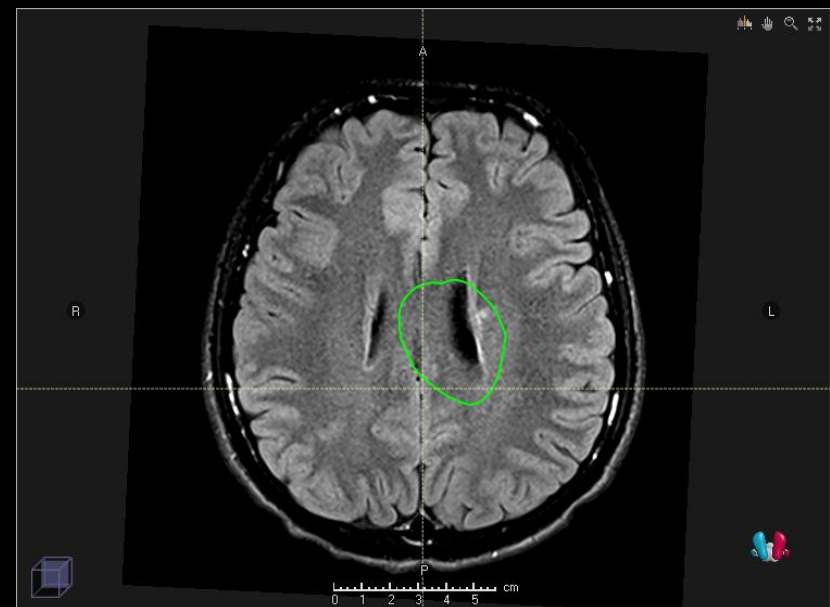
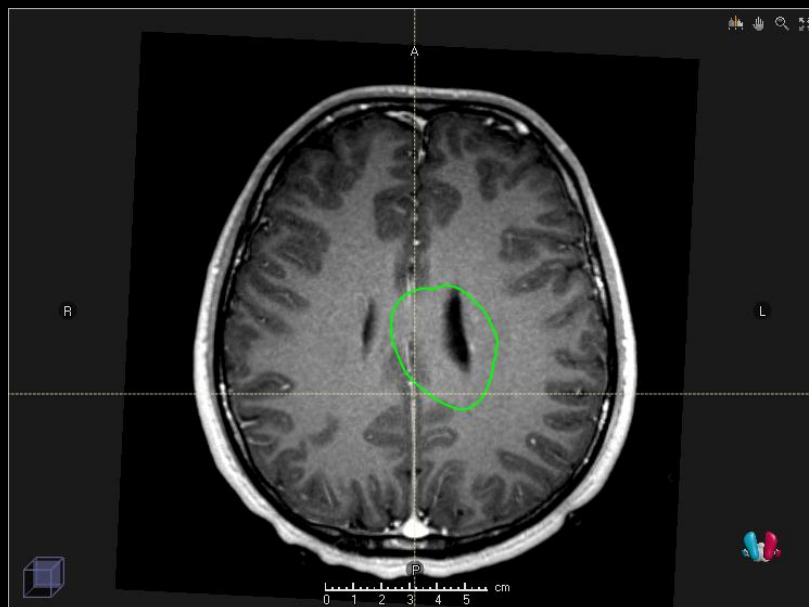
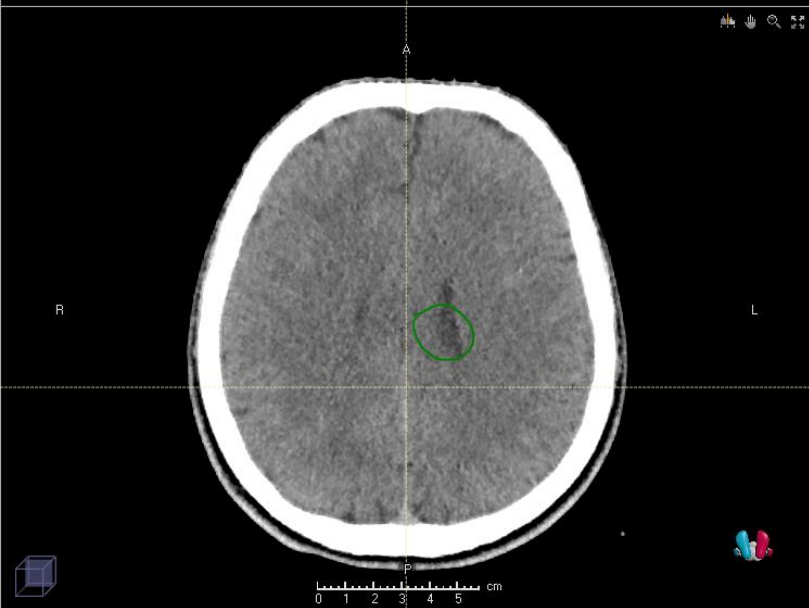
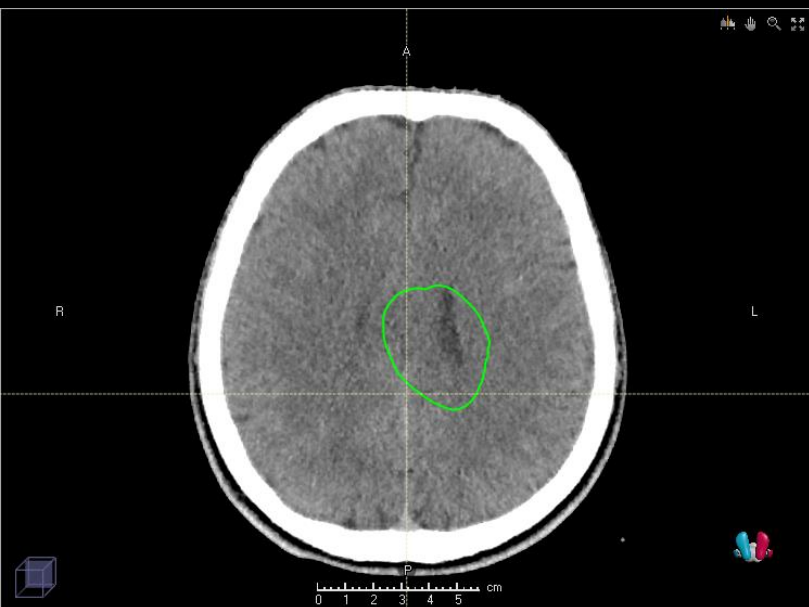
GTV1/CTV1

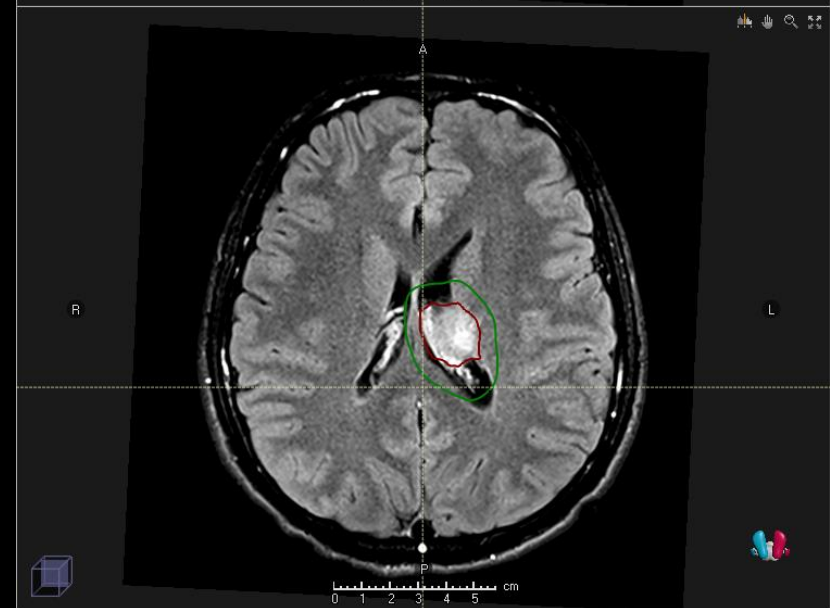
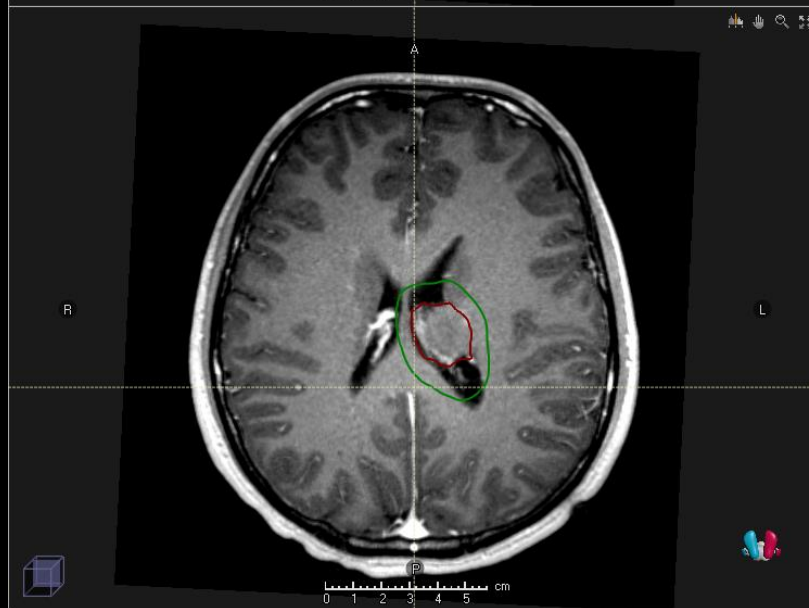
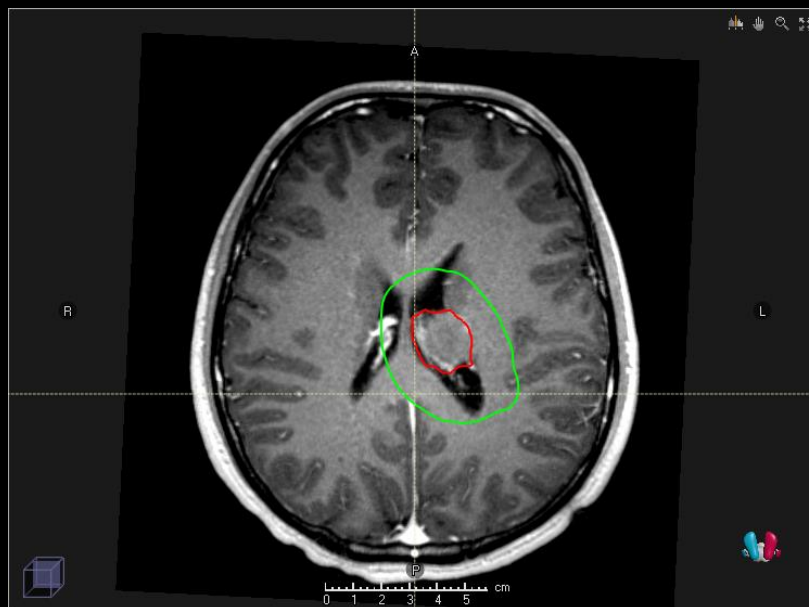
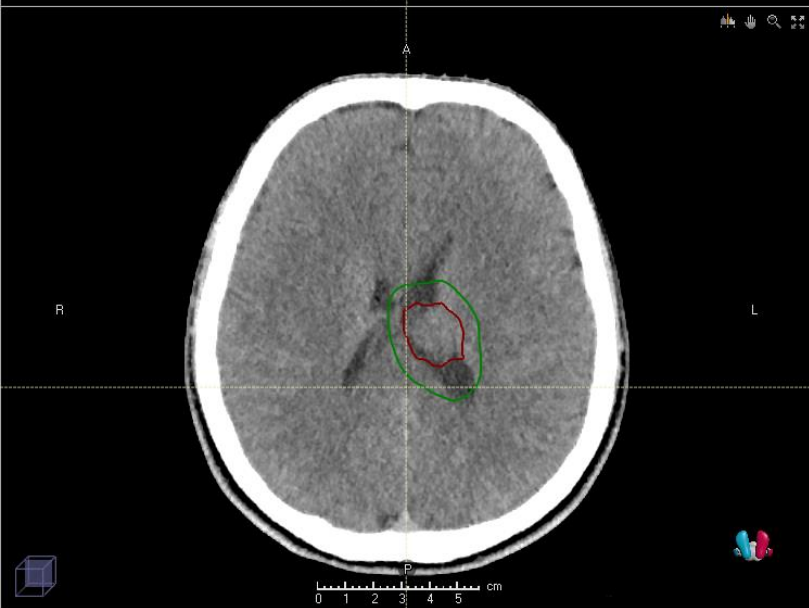
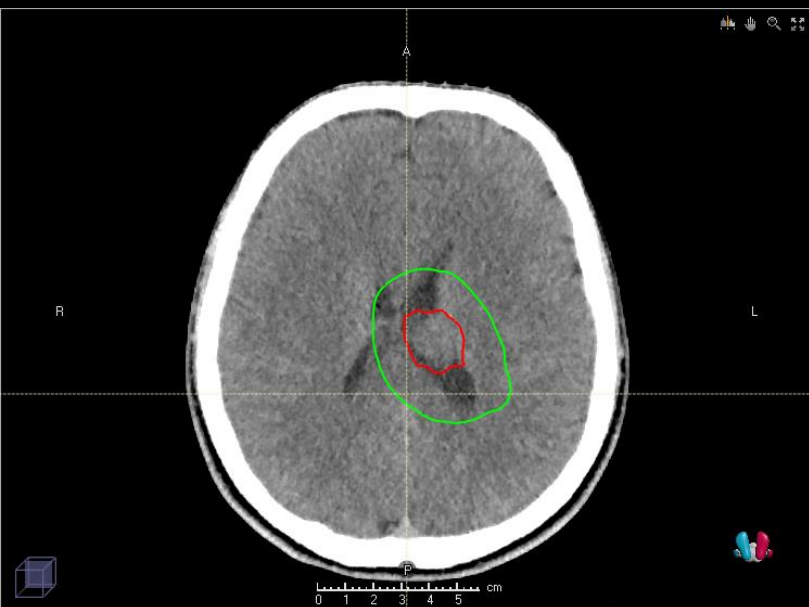


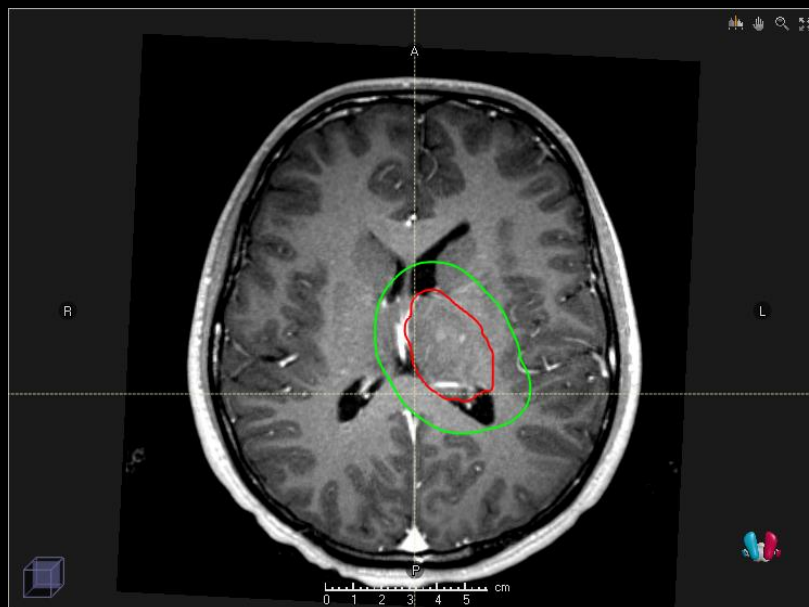
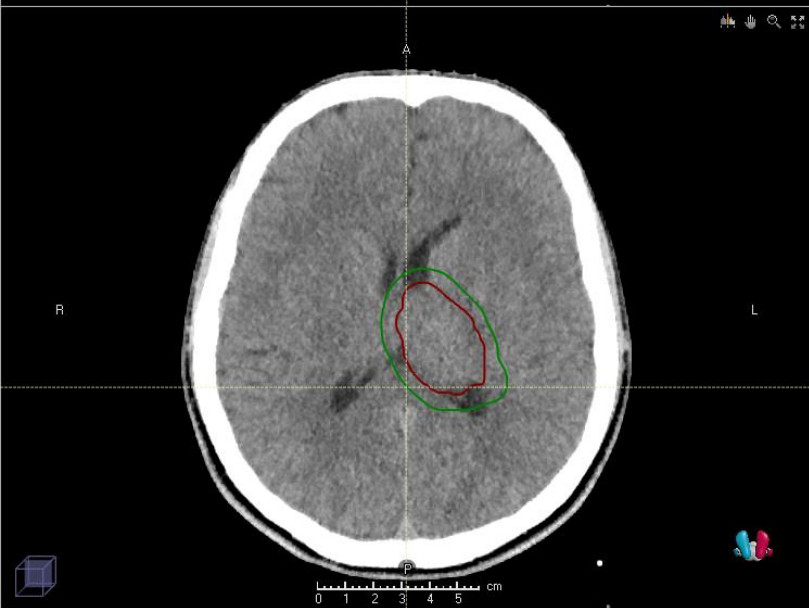
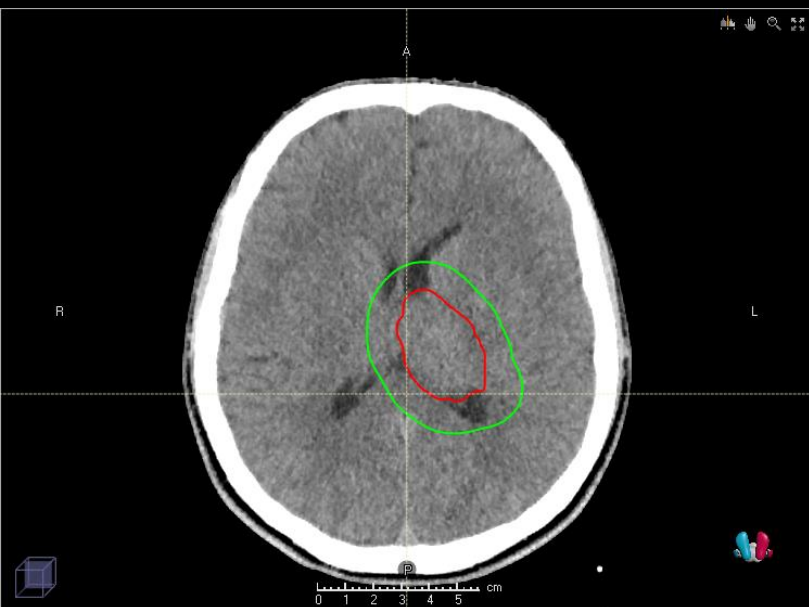
GTV2/CTV2 with brainstem, chiasm and optic nerves

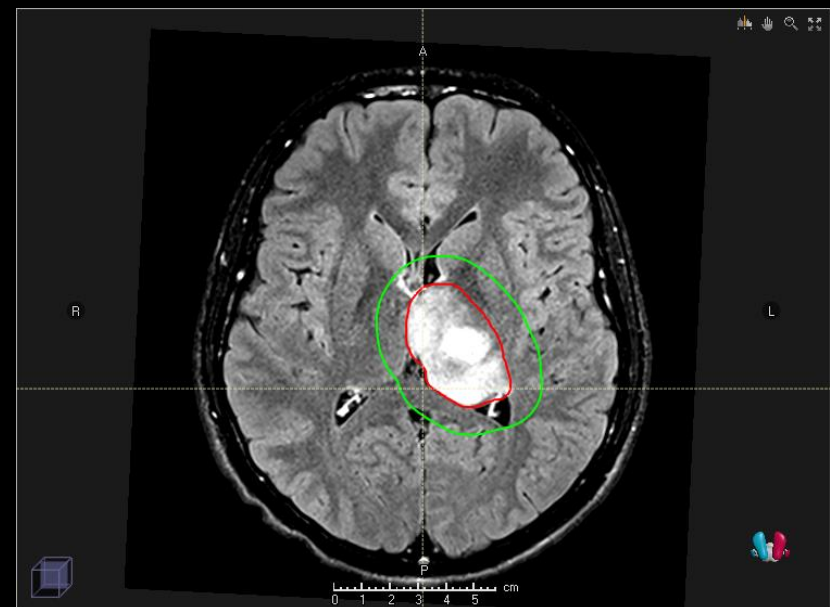
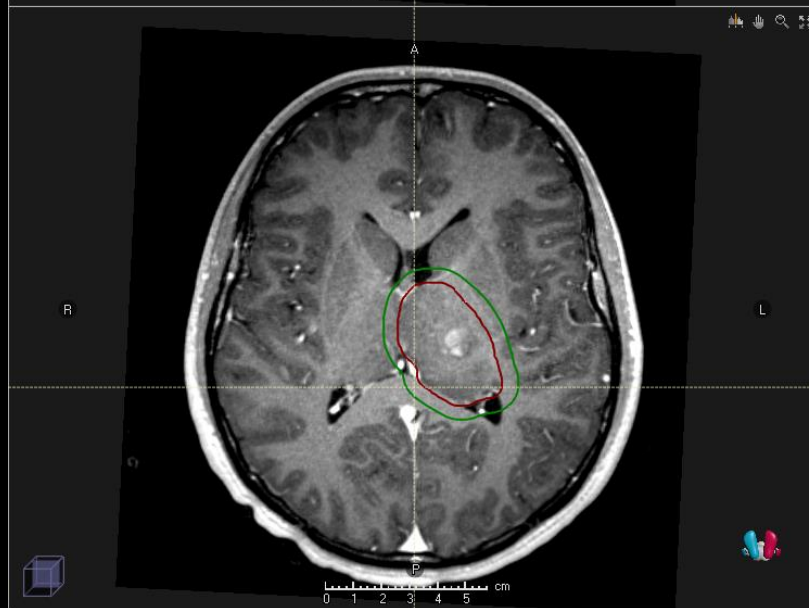
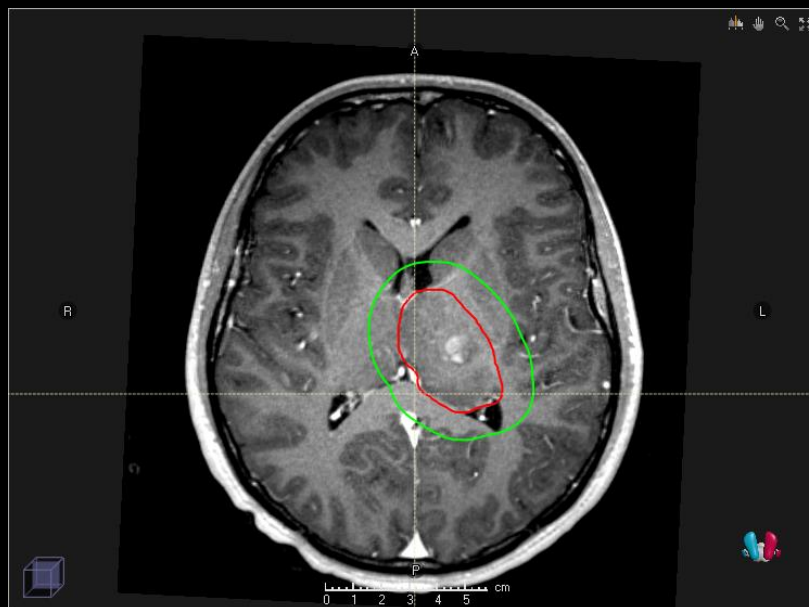
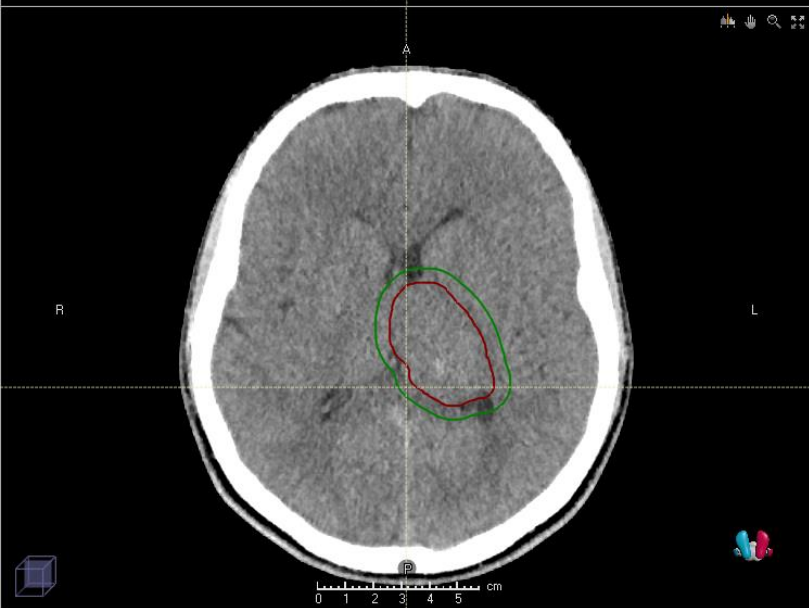
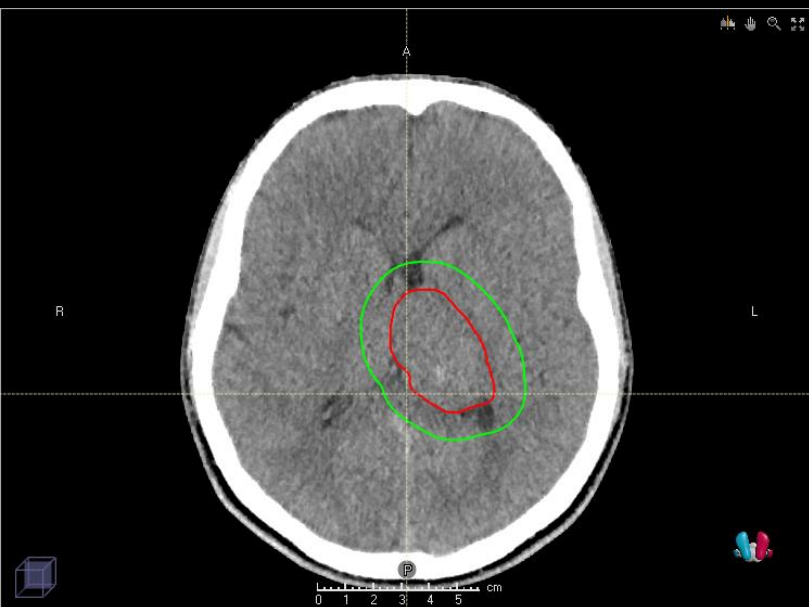


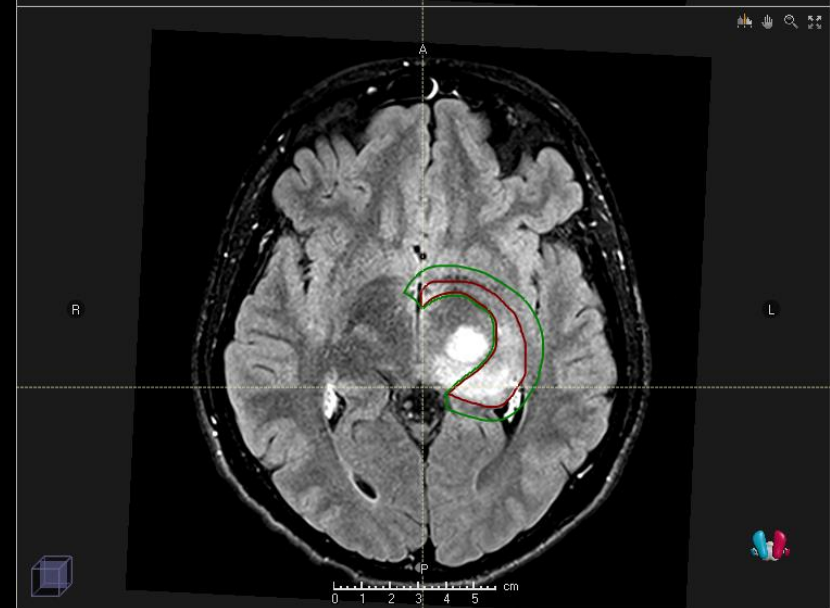
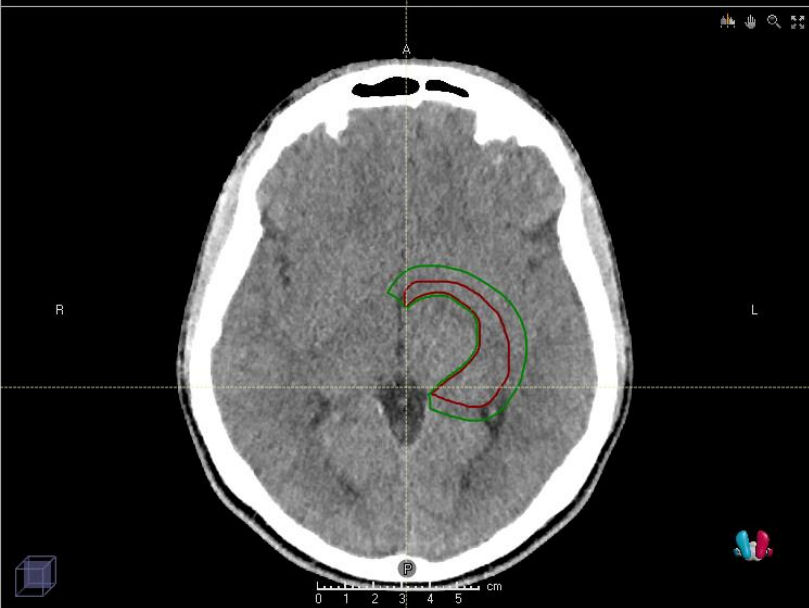
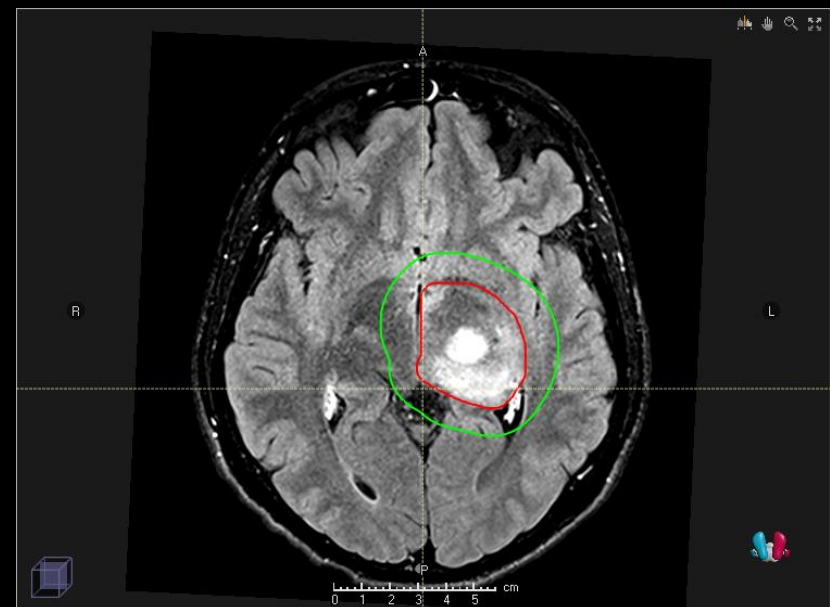
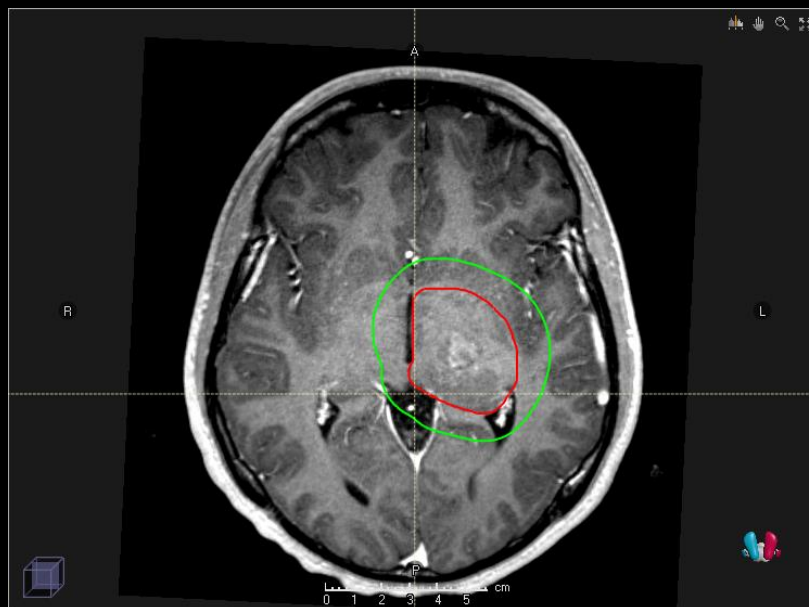


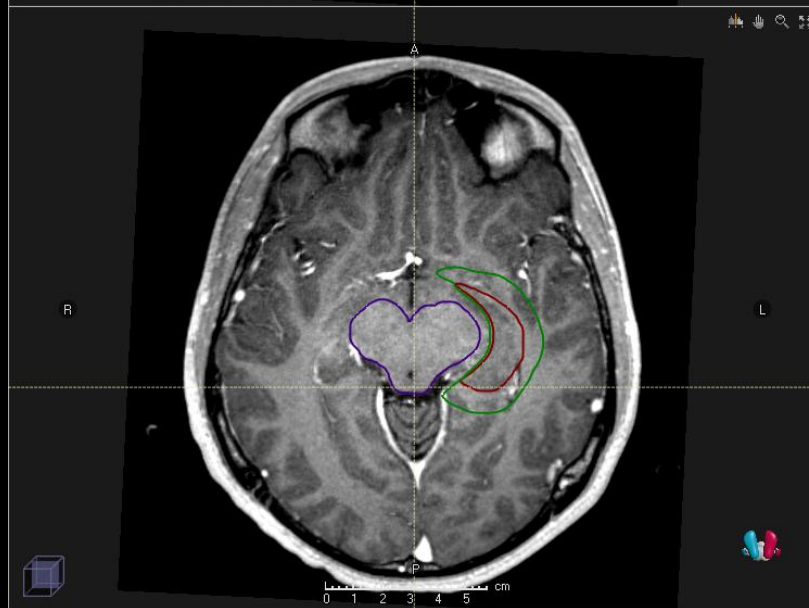
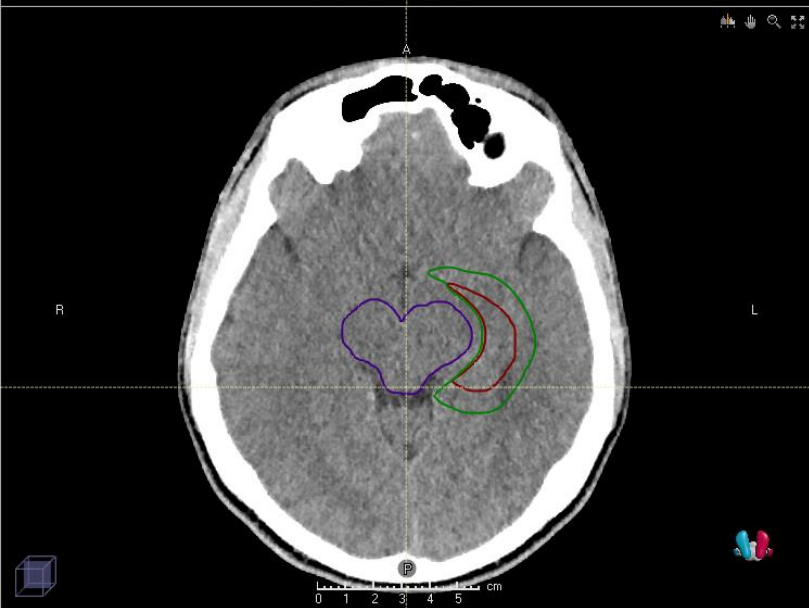
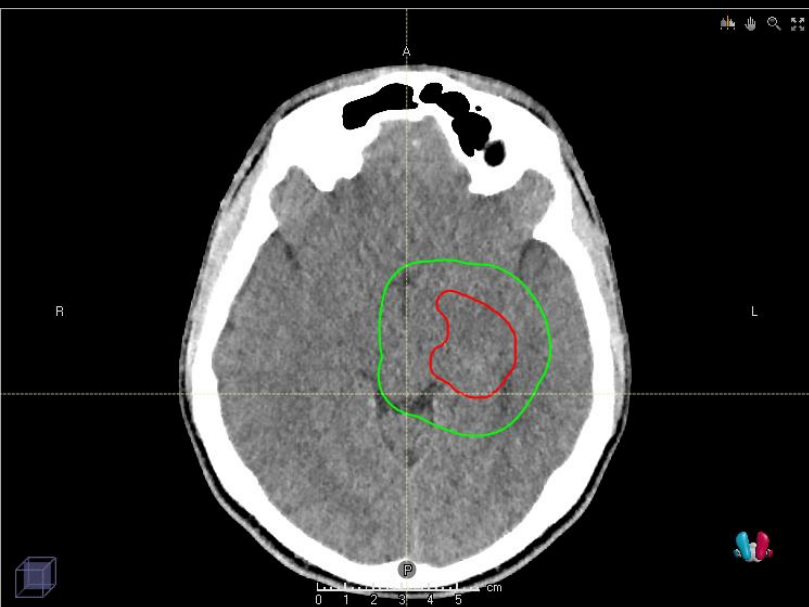


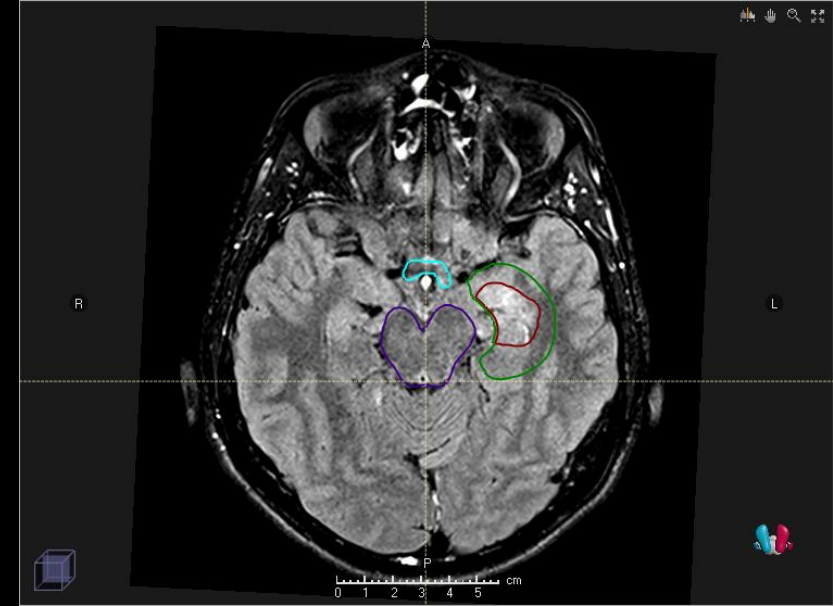
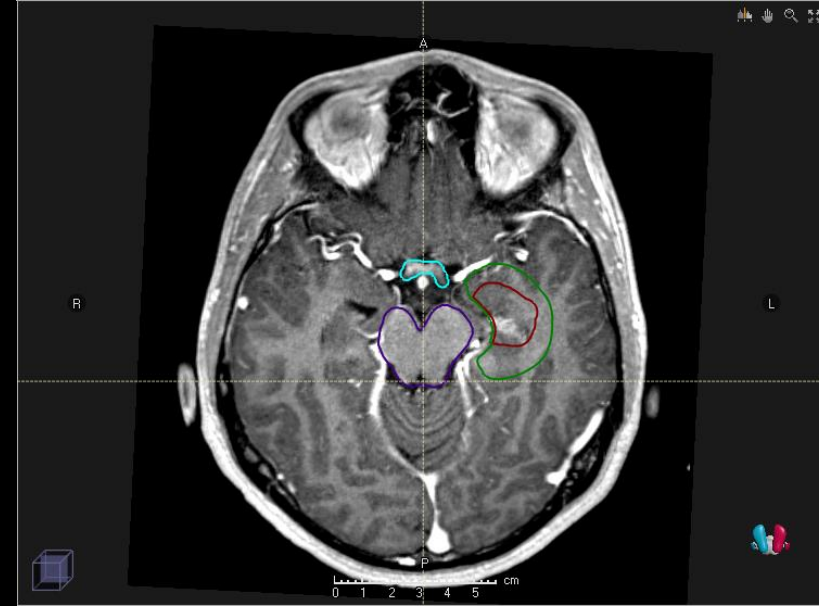
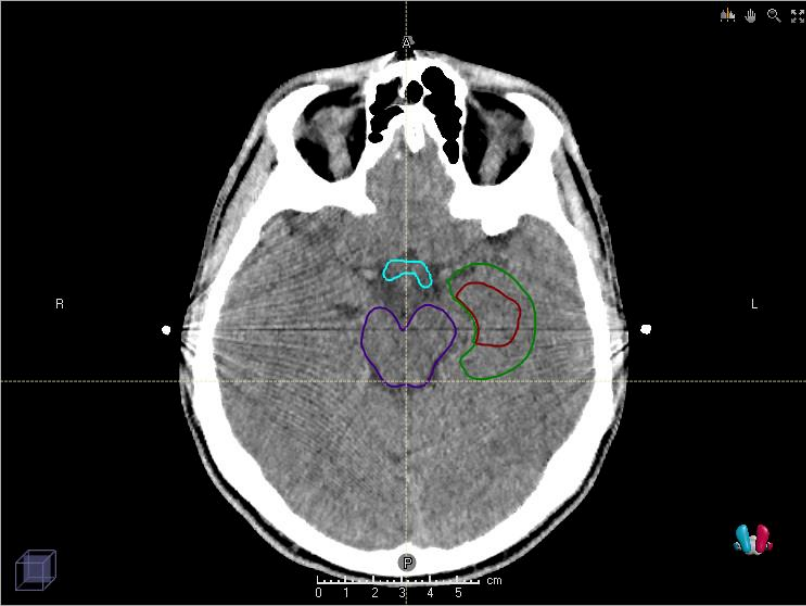
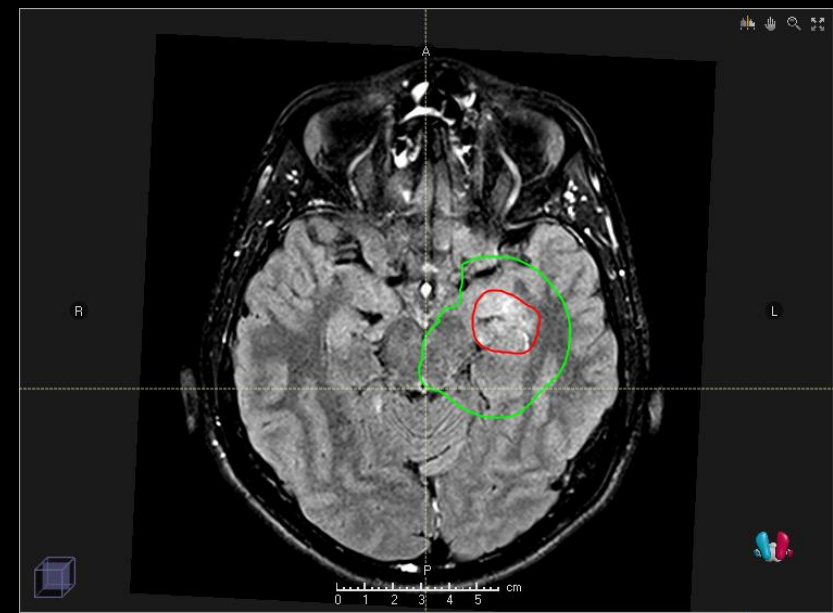
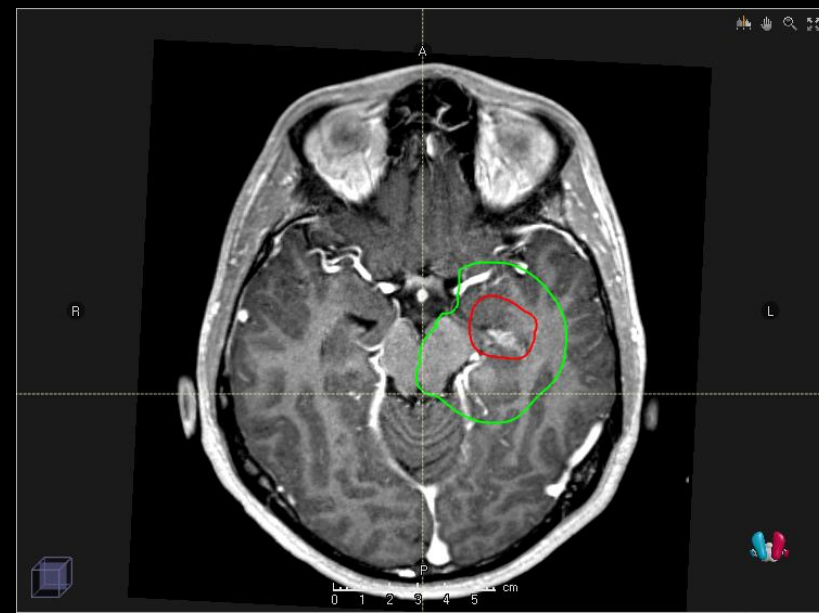
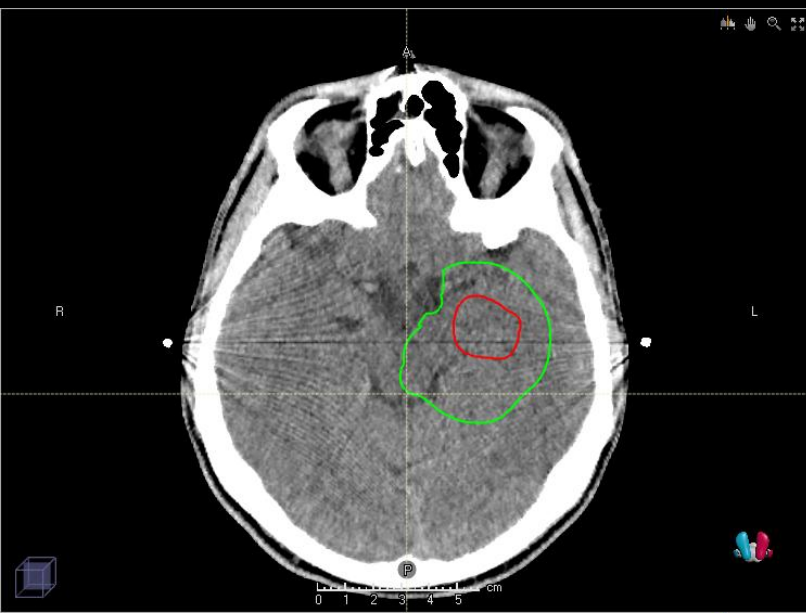


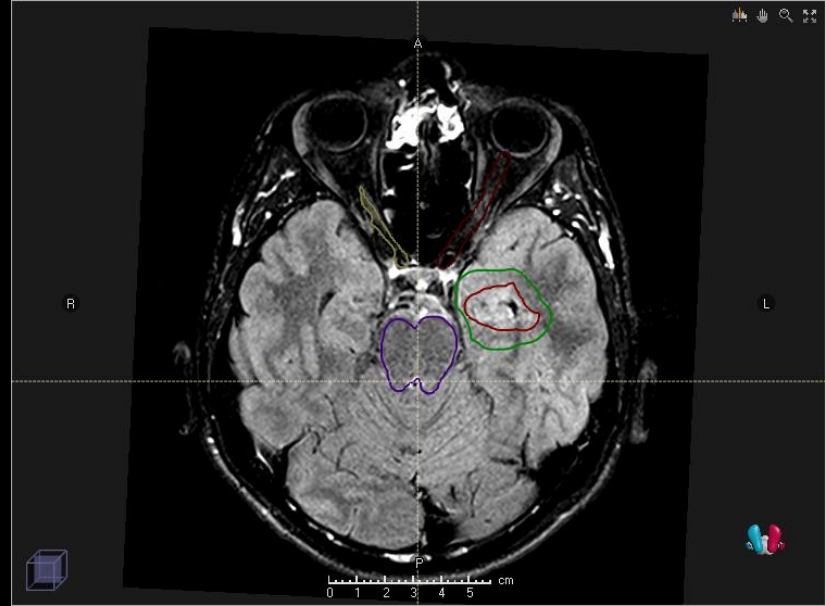
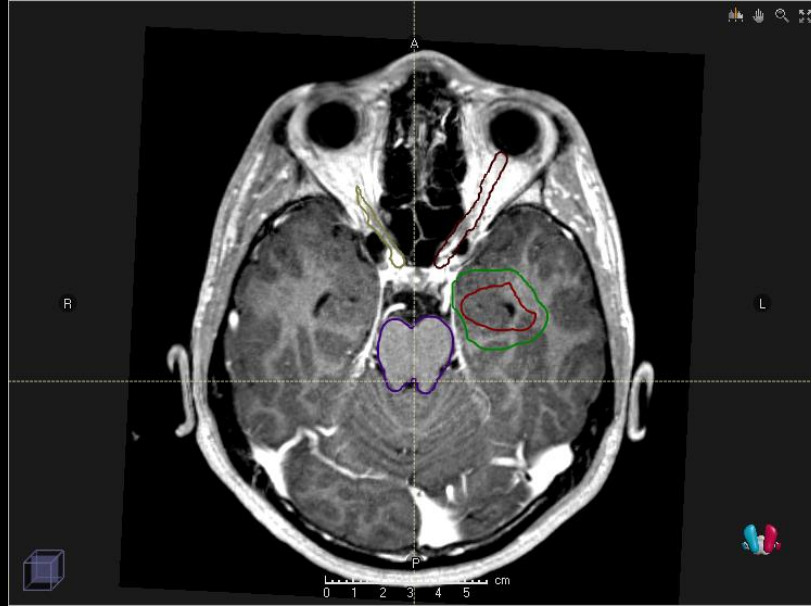
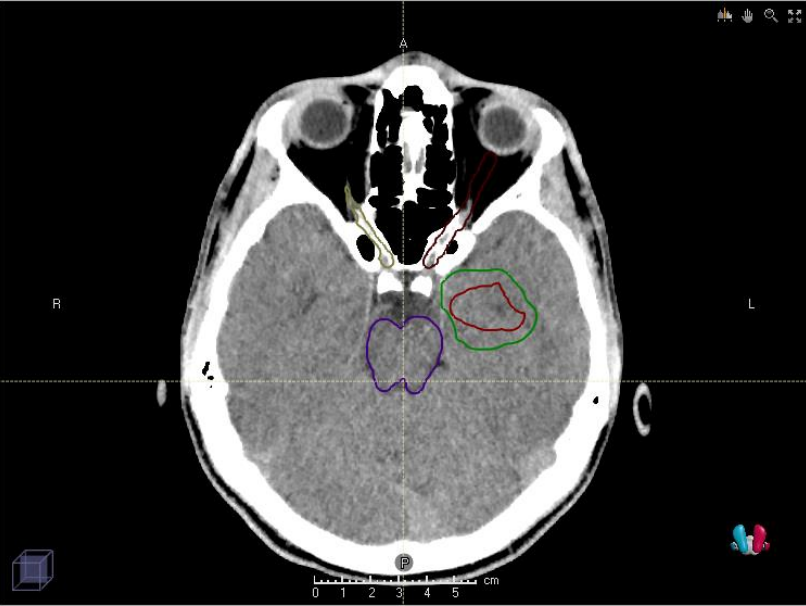
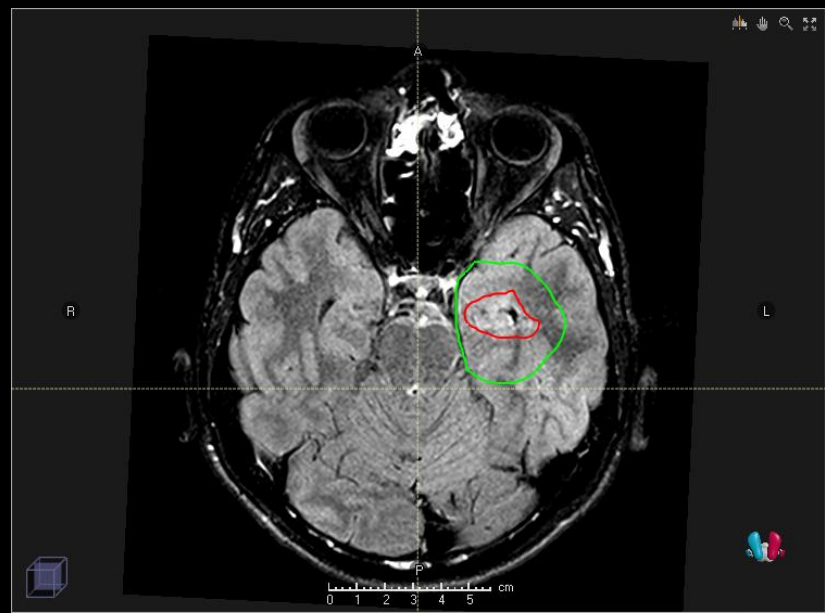
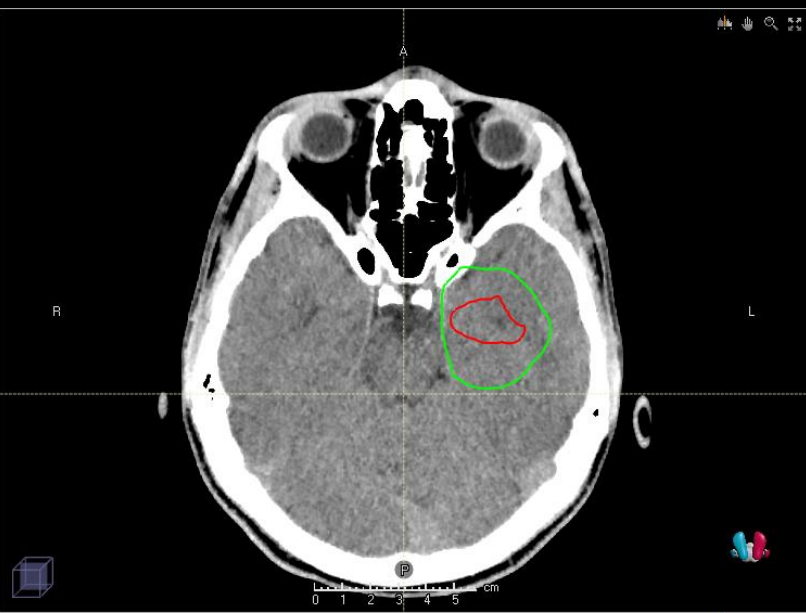


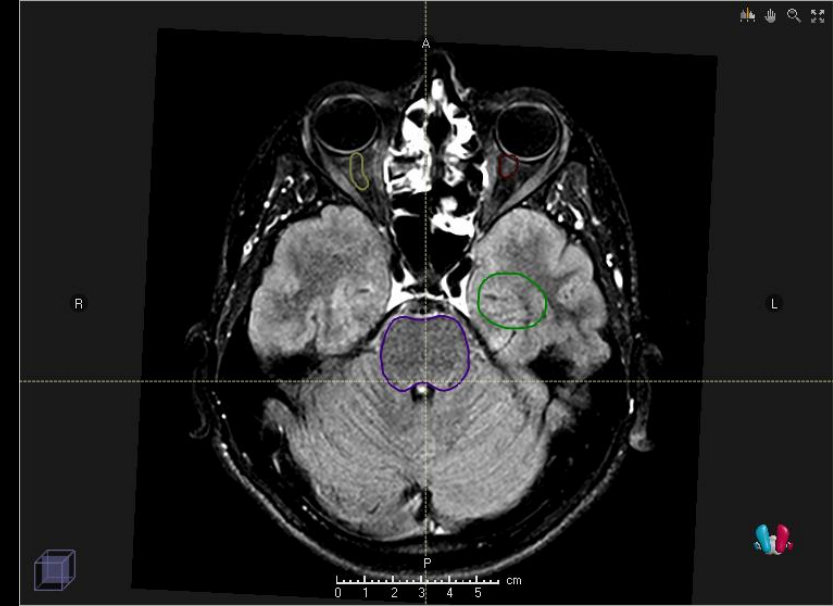
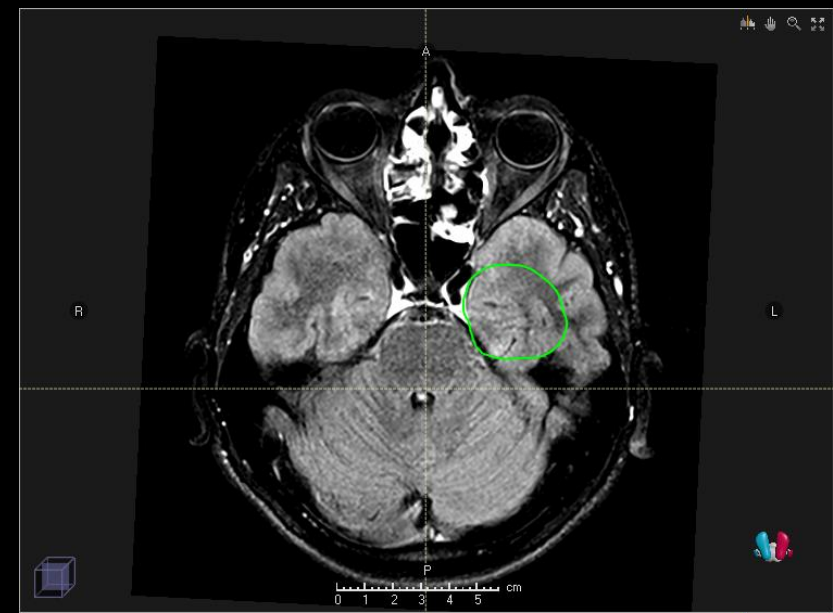
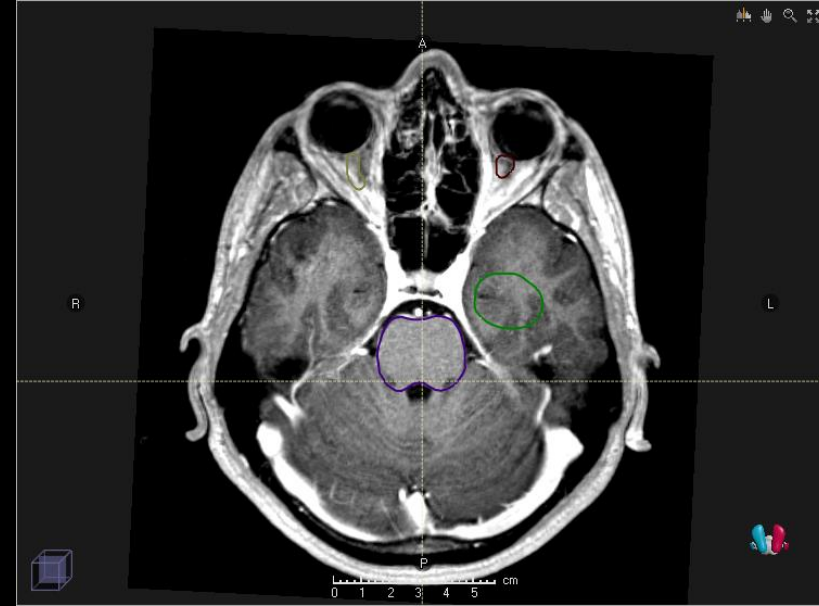
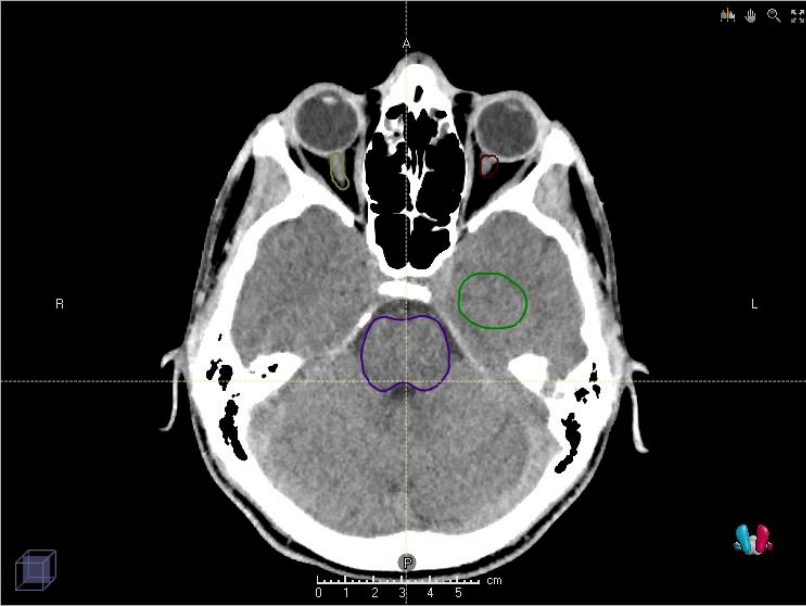
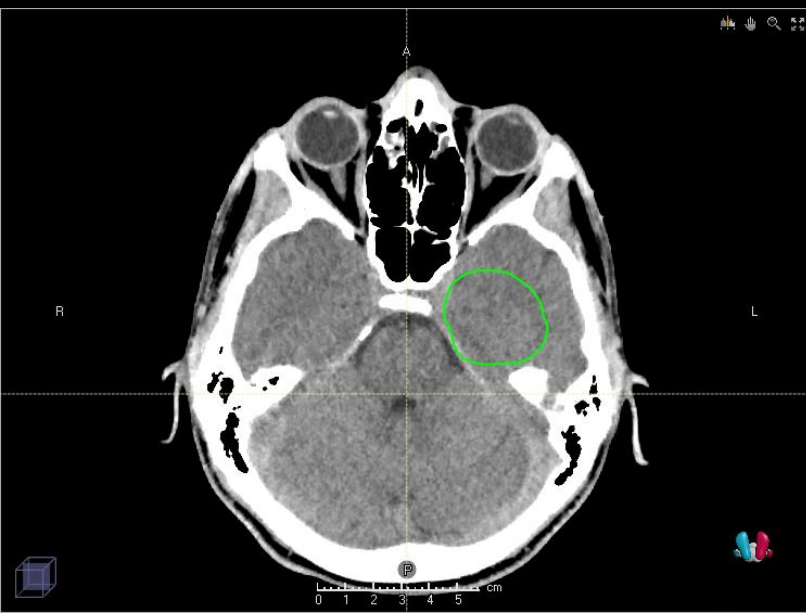


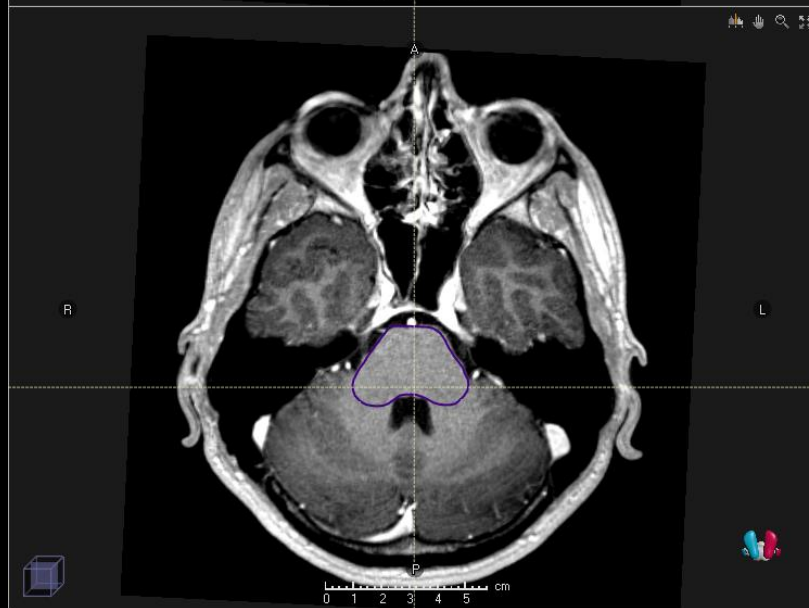
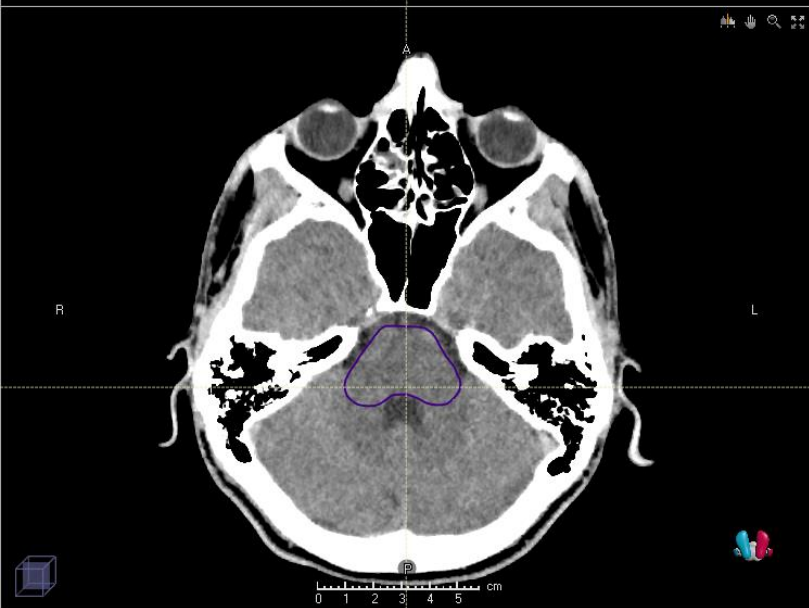
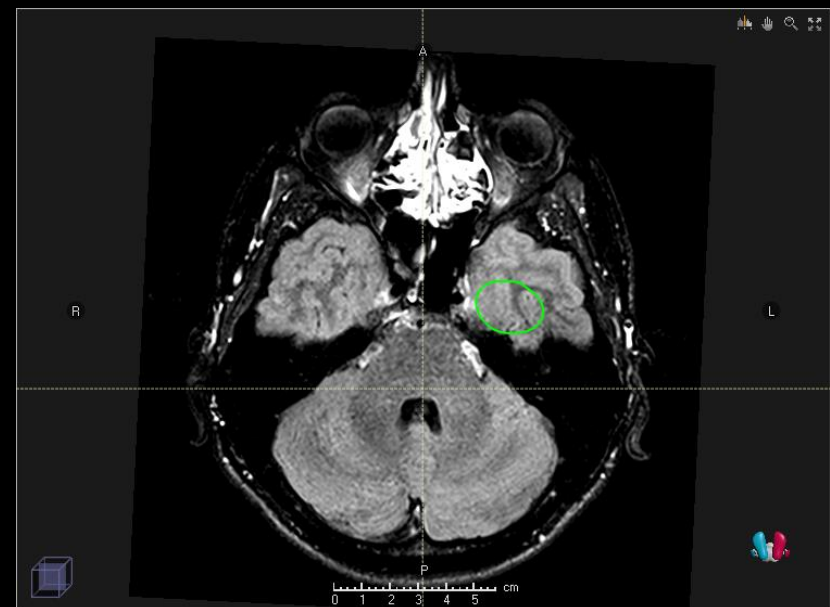
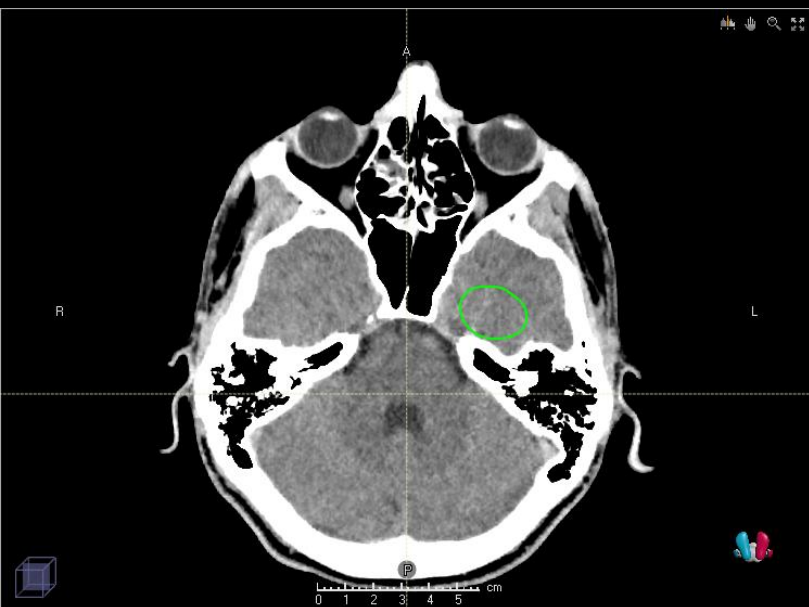


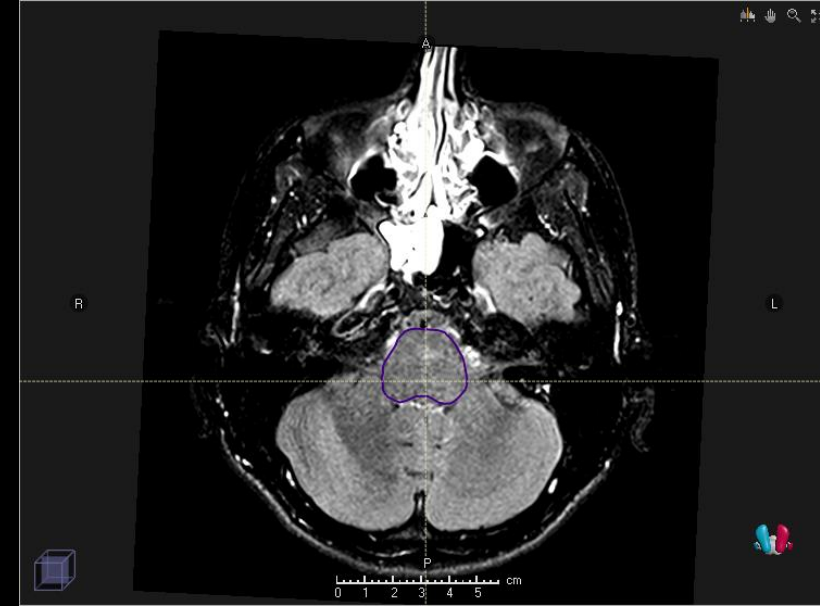
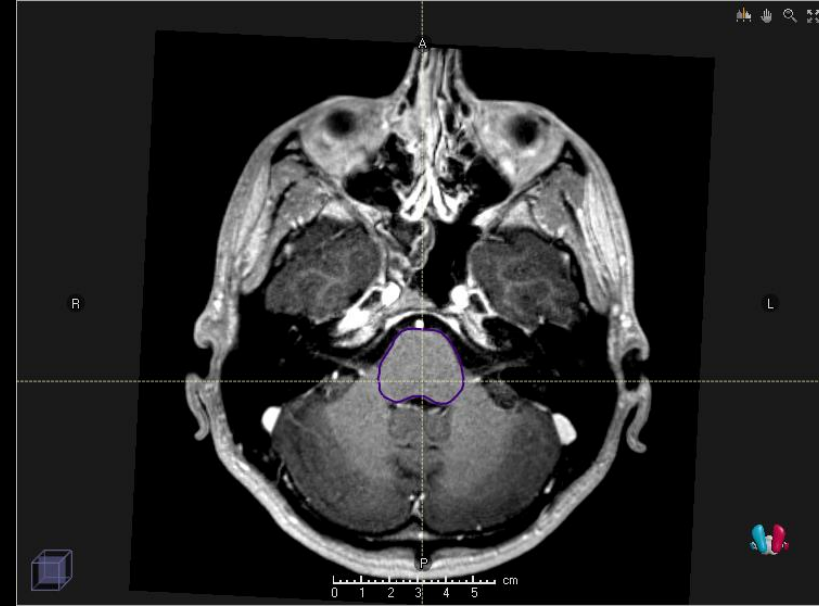
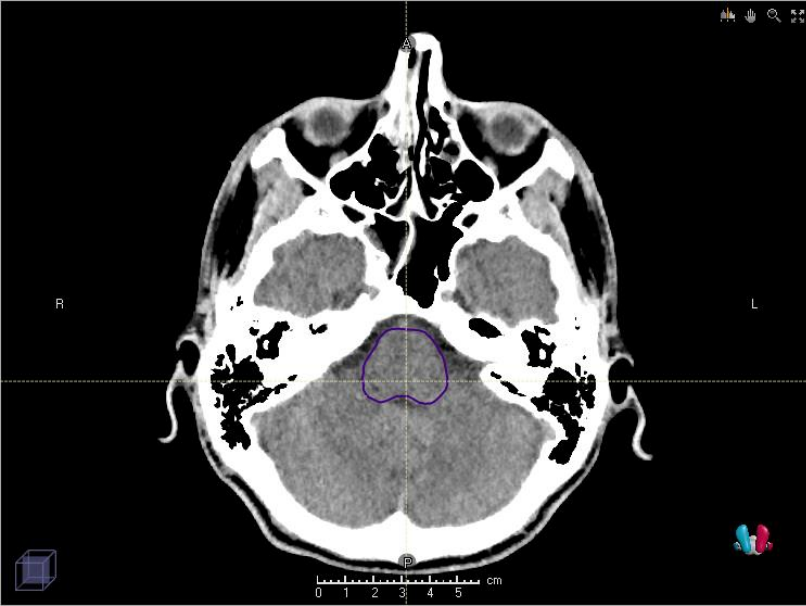
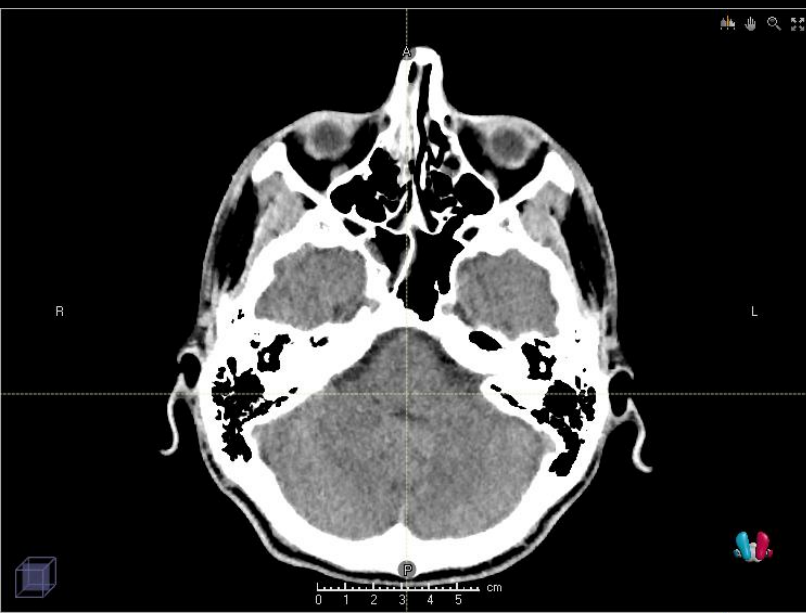












Strata DIPG

GTV1 = enhancing and non-enhancing tumour

CTV1 = 1 cm expansion on **GTV1**; may extend superiorly into the thalami and inferiorly into the spinal cord

AXIAL

CT



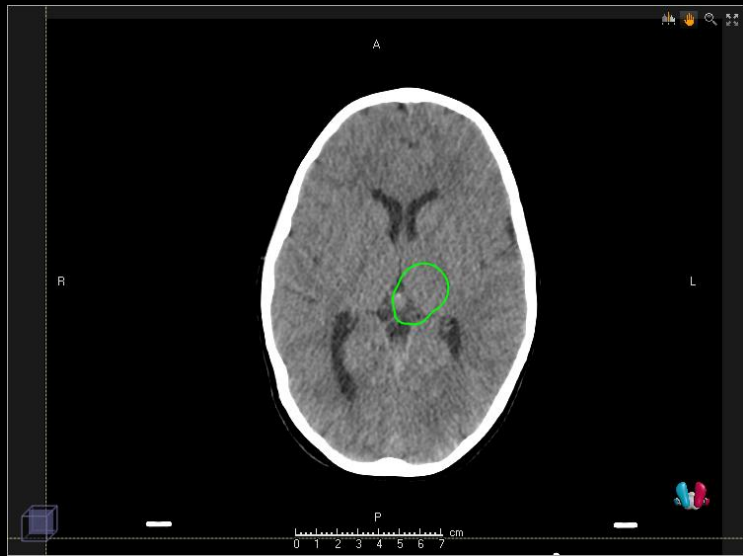
MR T1+gad

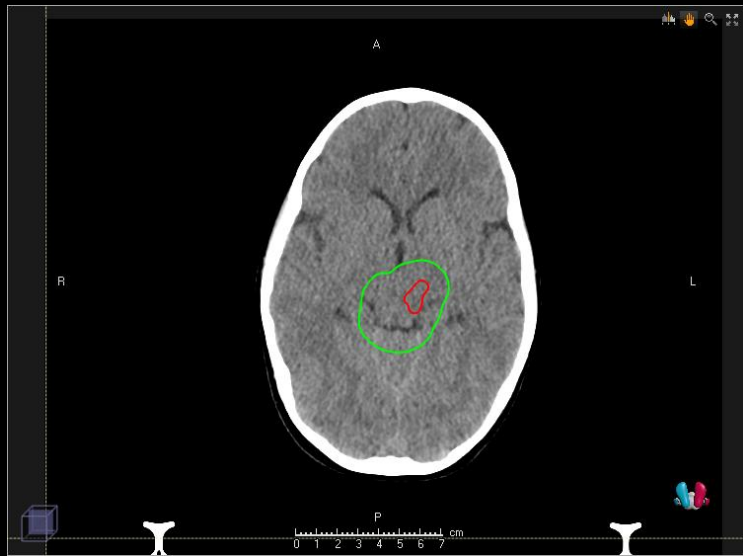


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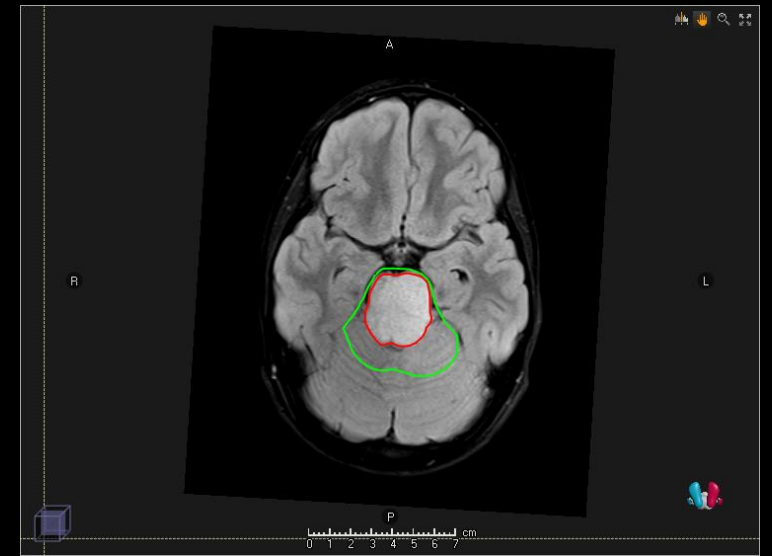


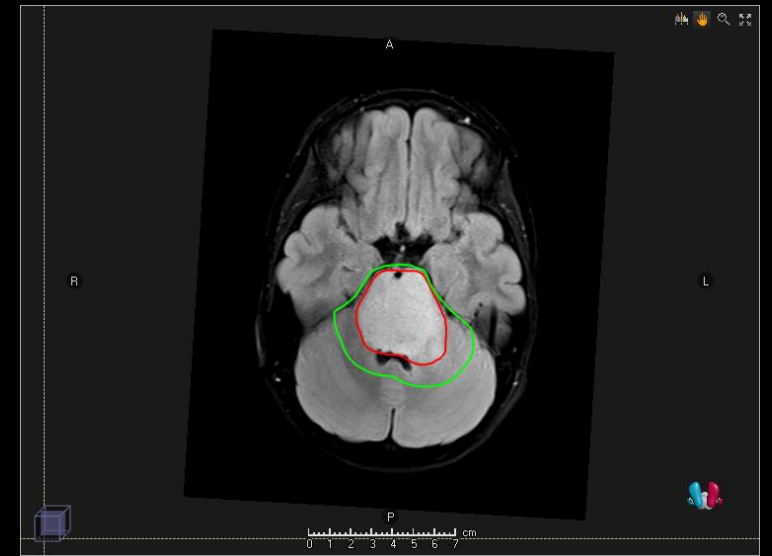


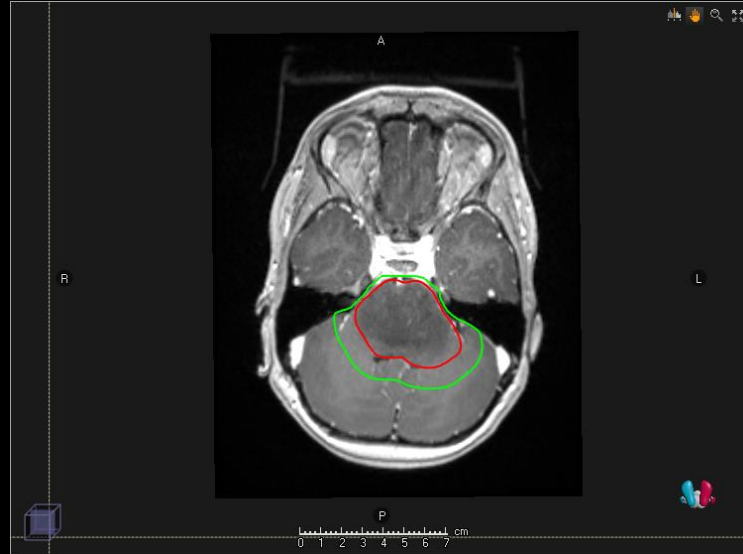


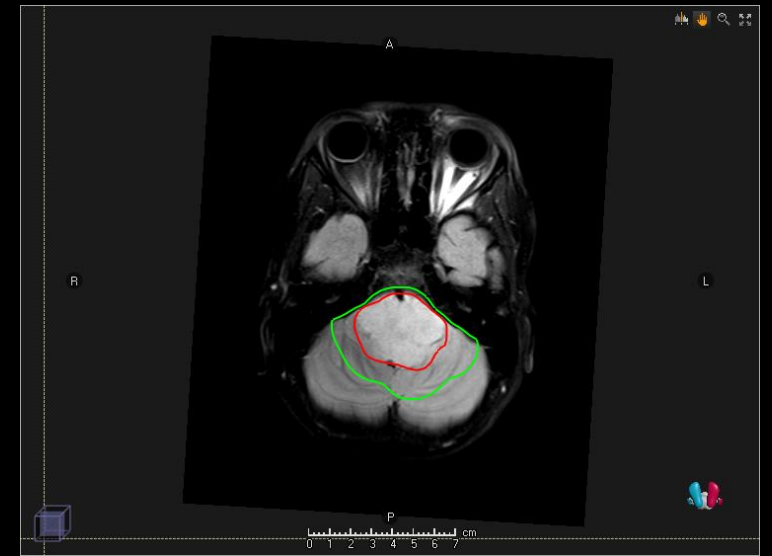
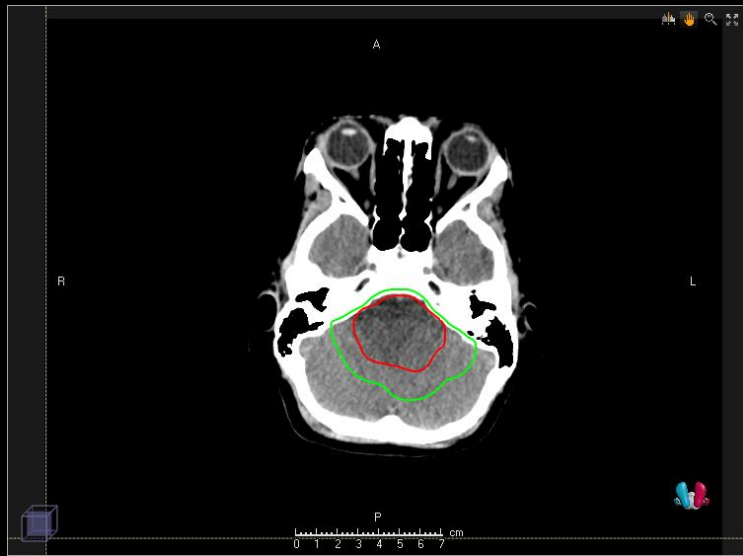




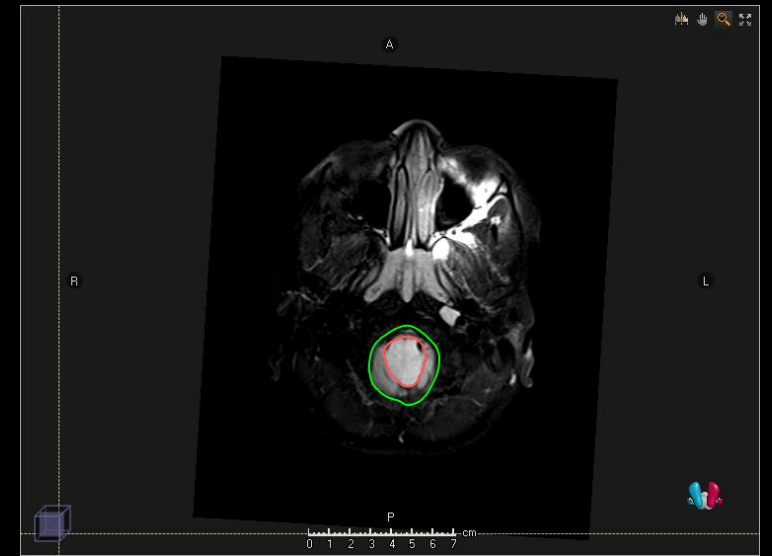
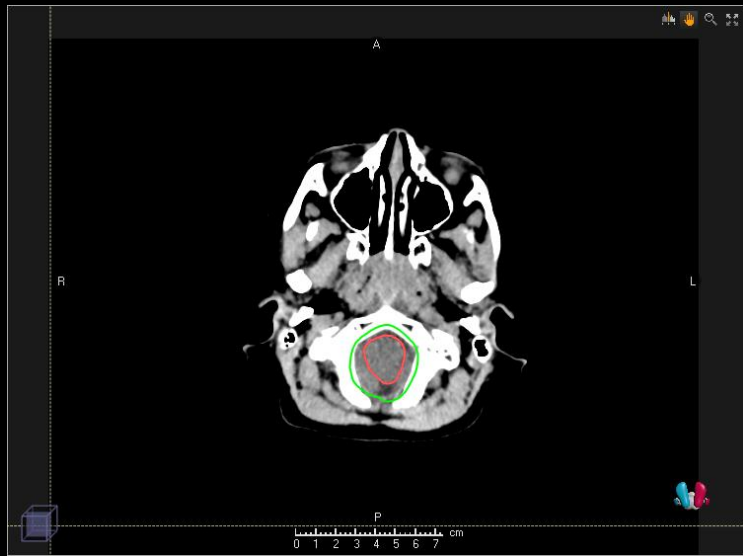


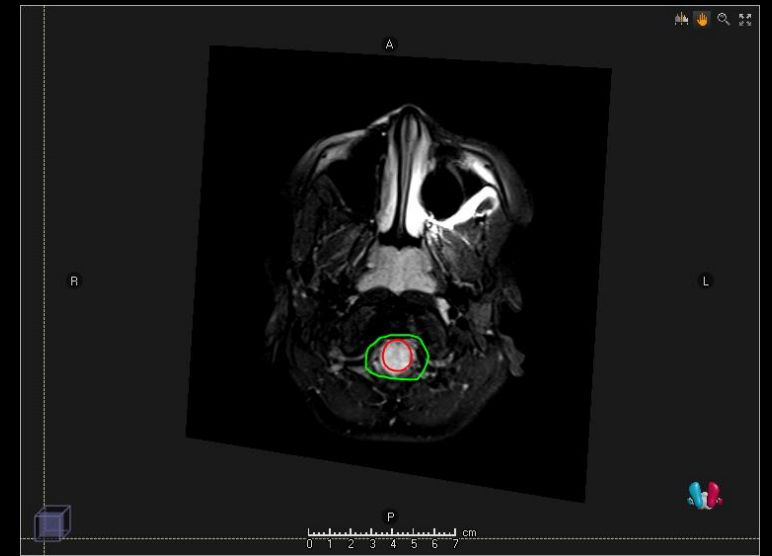
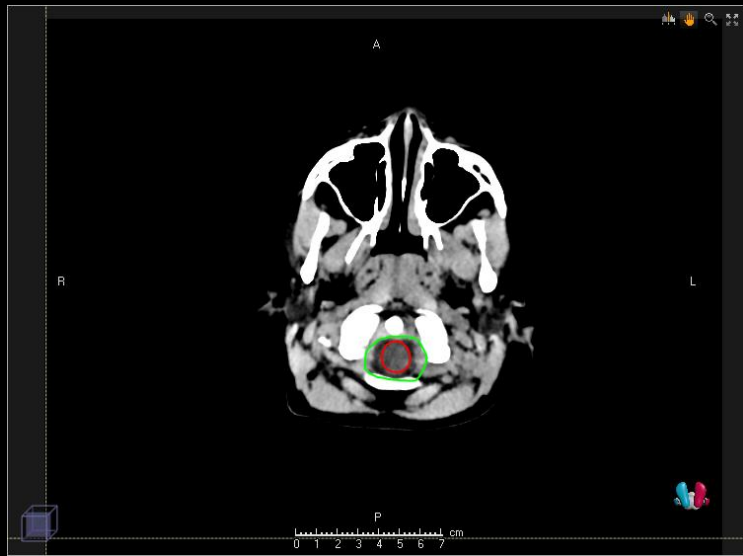


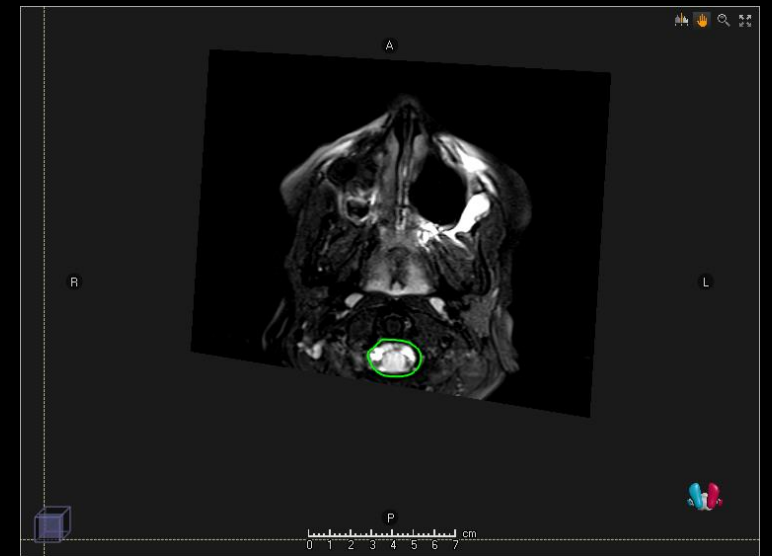
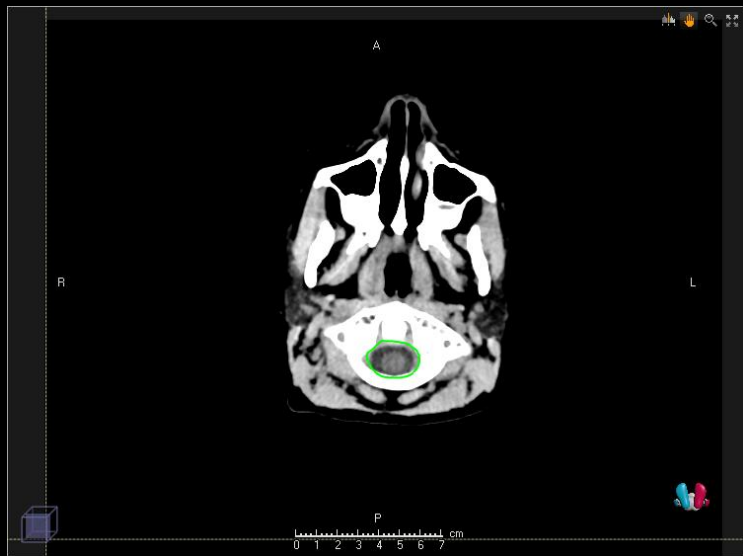


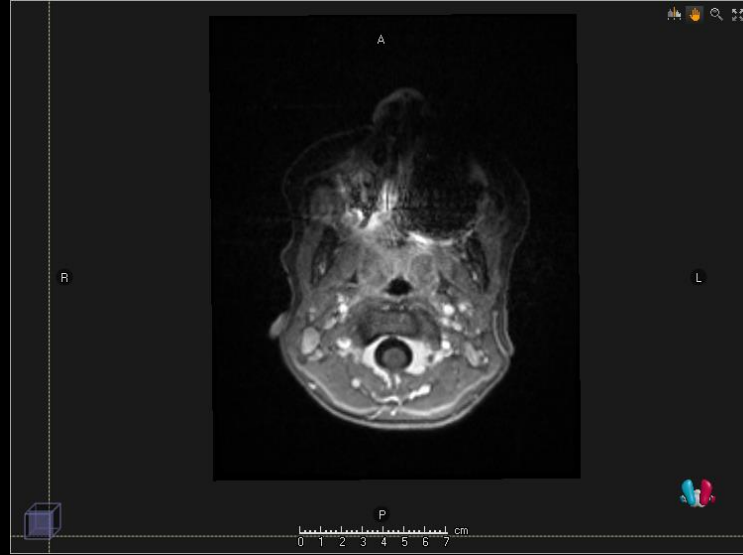
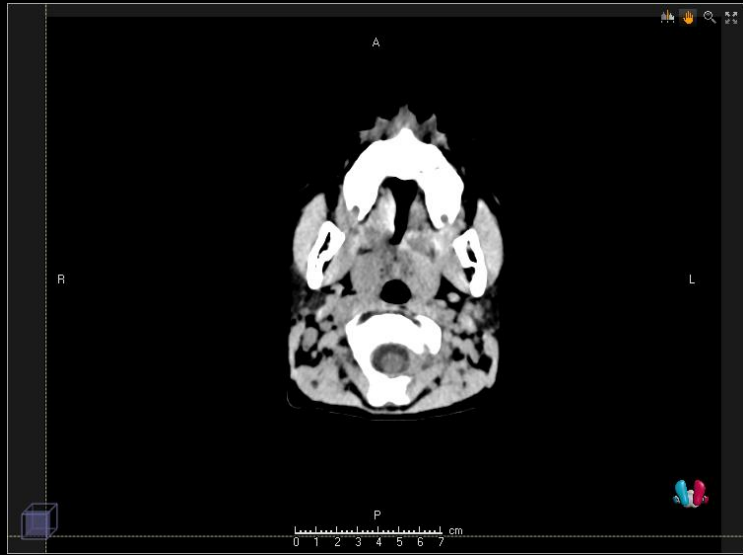






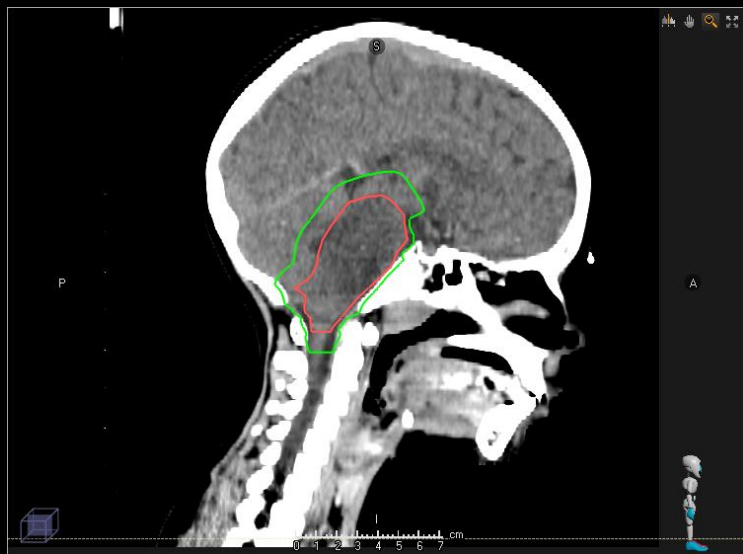




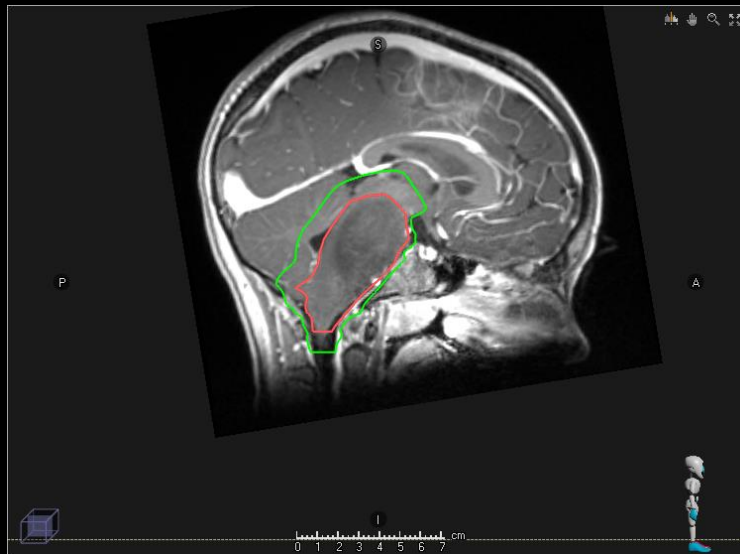


SAGITTAL

CT



MR T1+gad



MR T2 FLAIR



Strata DMG/HGG, primary spinal tumors

GTV1 = all tissues initially involved with disease and the entire residual tumour (enhancing and non-enhancing)

CTV1 = expansion on **GTV1** to fill the spinal canal in the cranial and caudal directions to include 2 vertebral bodies above and 2 vertebral bodies below **GTV1**

GTV2 = only residual disease based on post-operative MRI scans (enhancing and non-enhancing); not defined for tumors that are completely resected

CTV2 = expansion on **GTV2** to fill the spinal canal in the cranial and caudal directions to include 1 vertebral body above and 1 vertebral body below **GTV1**; not defined for tumors that are completely resected

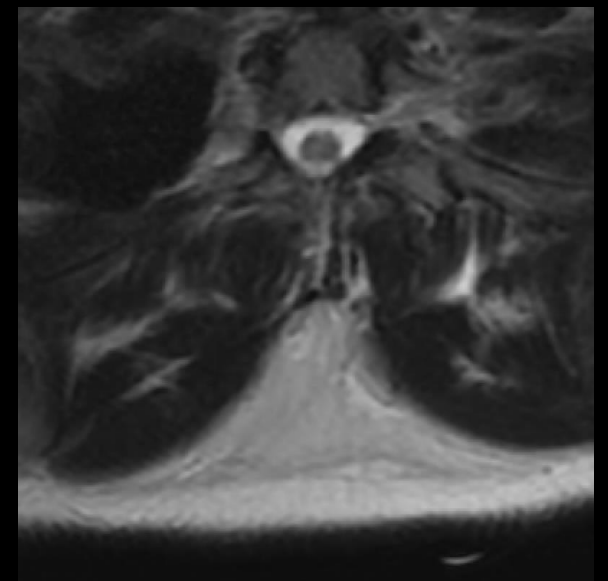
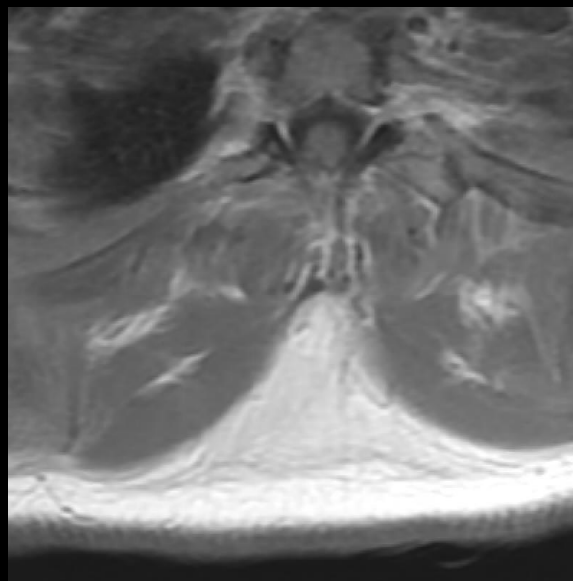
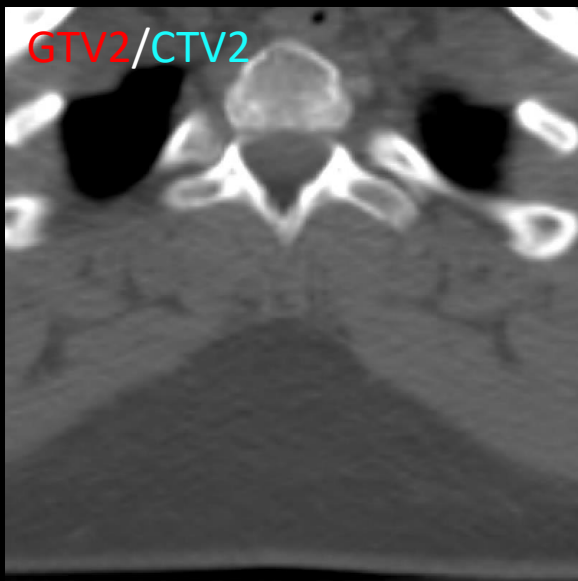
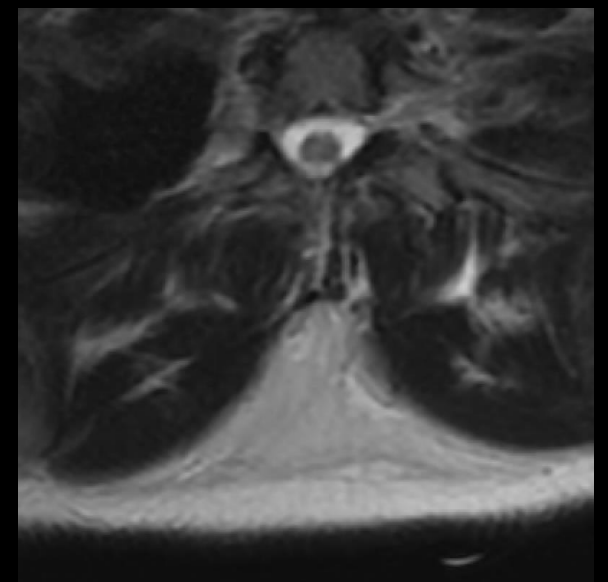
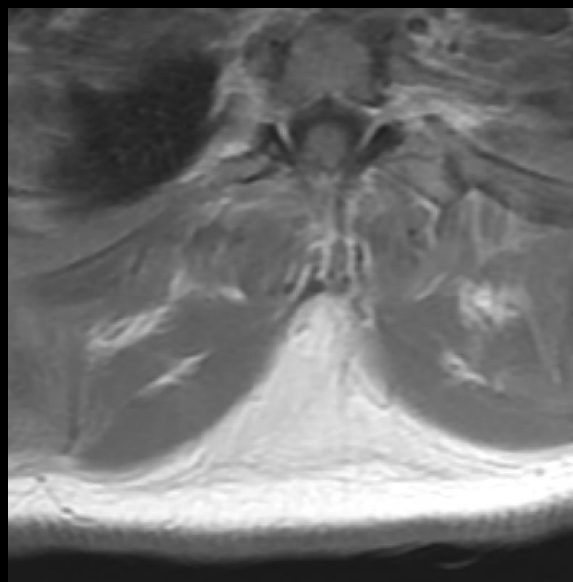
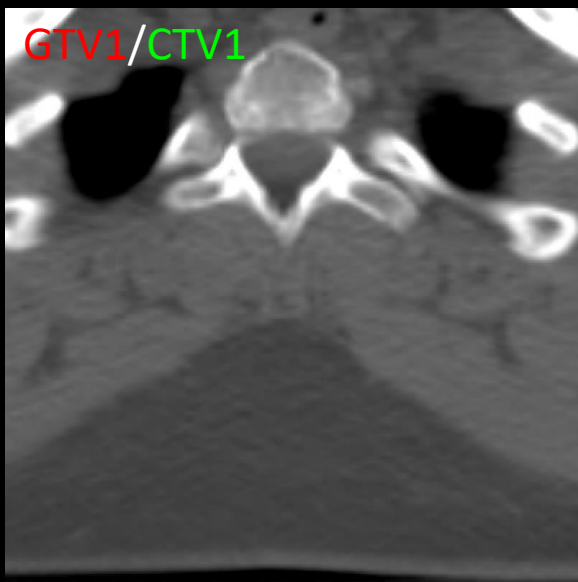
As illustrated in atlas, MR spine may not register perfectly with CT; in such cases, CT shall determine contour of spinal canal

AXIAL

CT

MR T1 + gad

MR T2

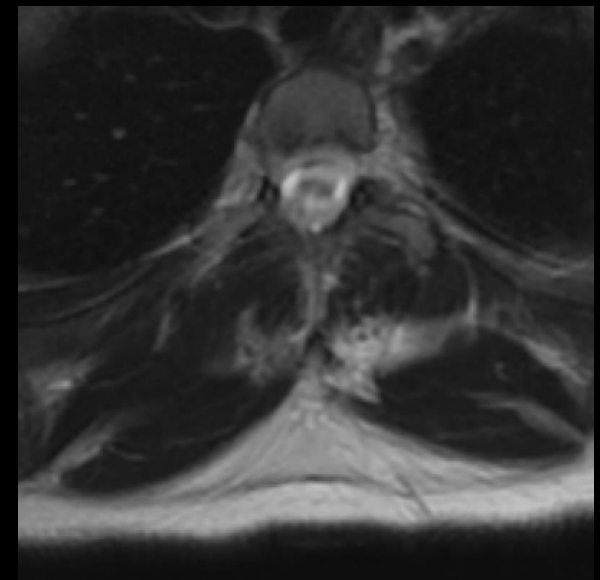
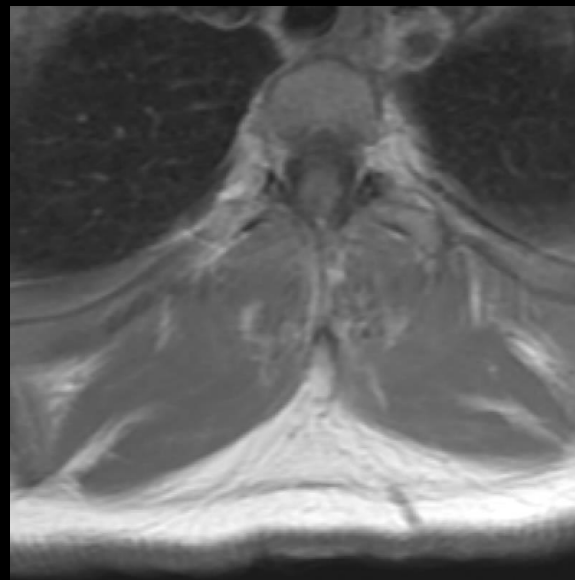
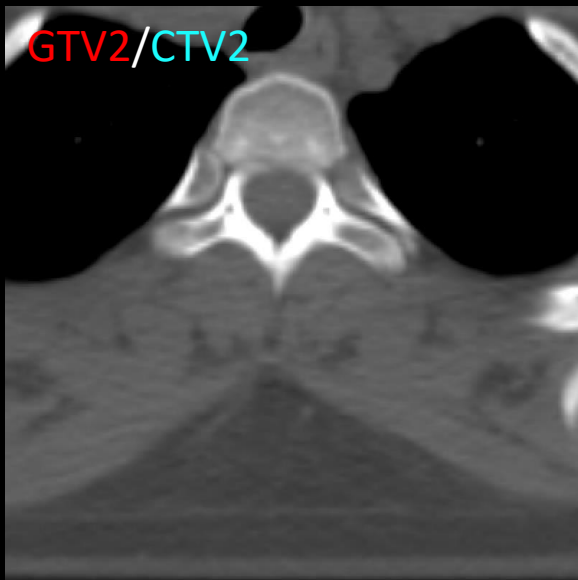
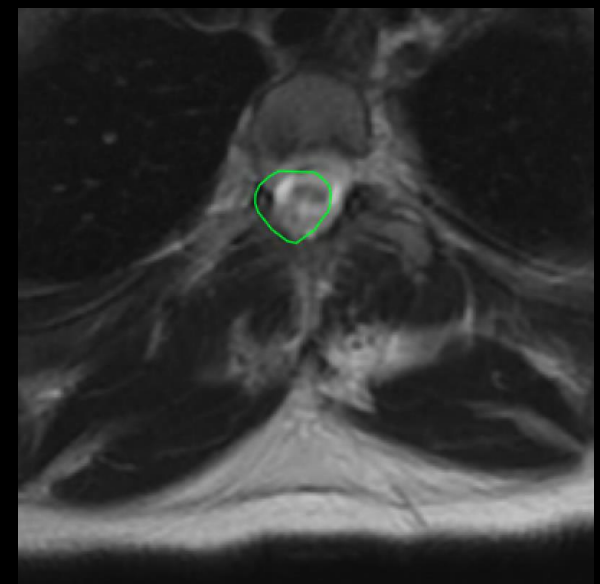
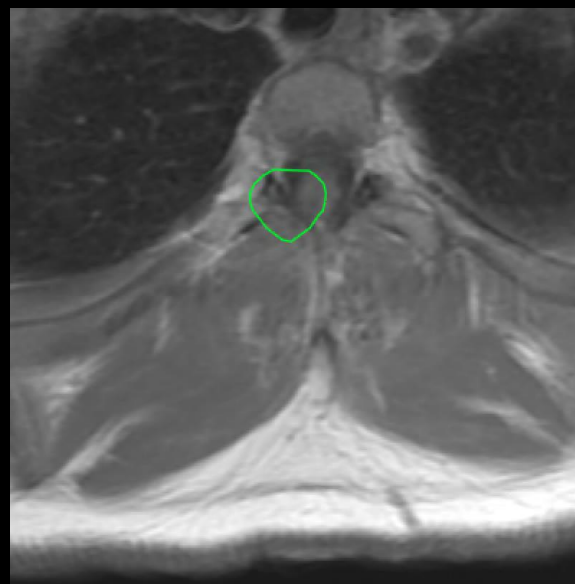
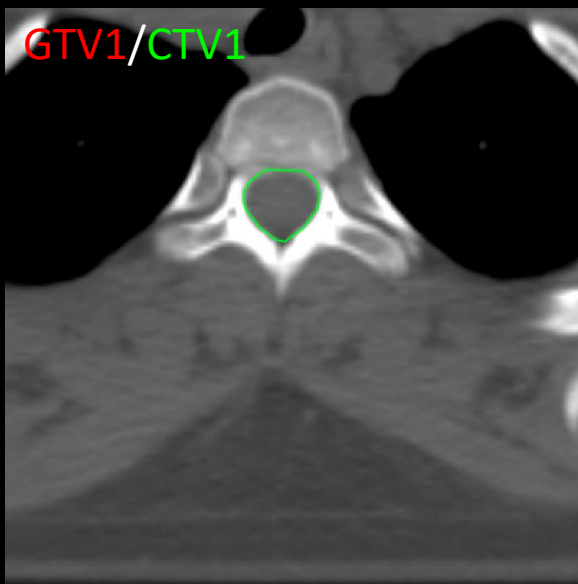


AXIAL

CT

MR T1 + gad

MR T2



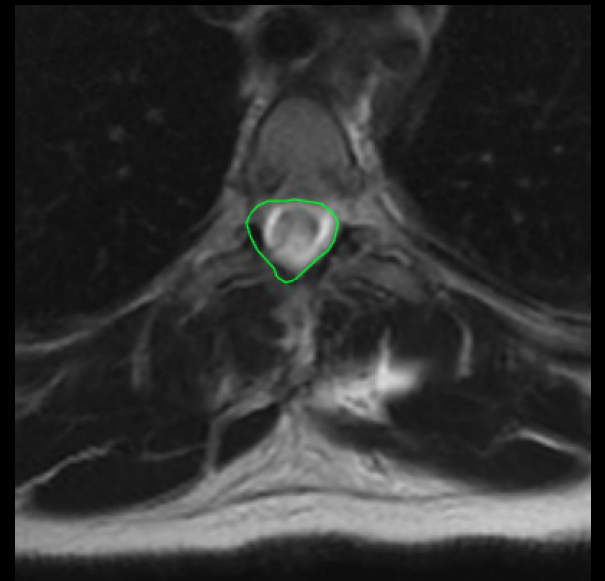
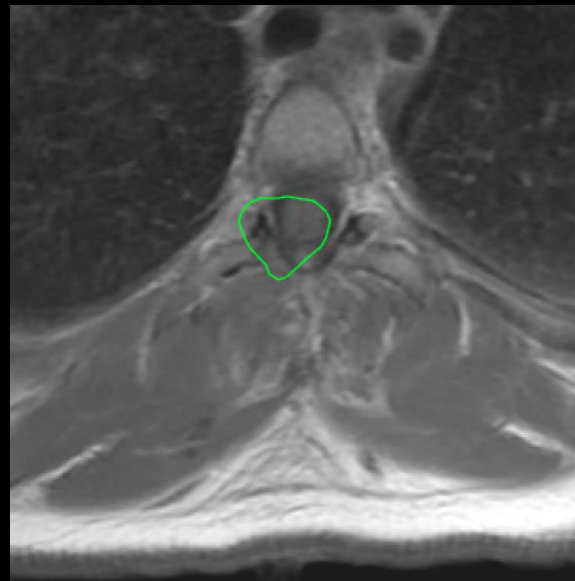
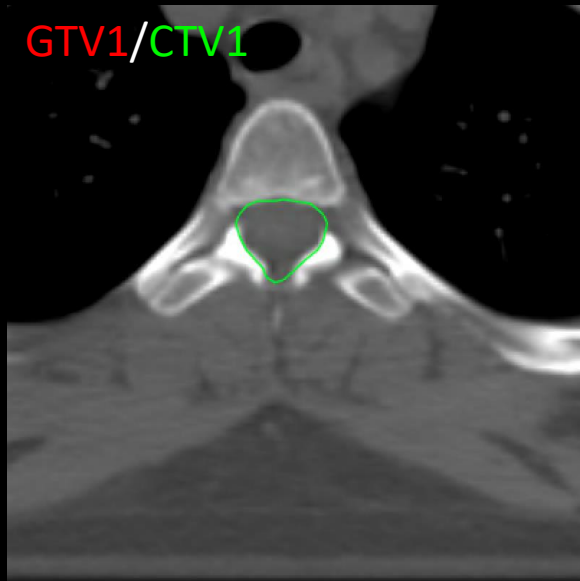
AXIAL

CT

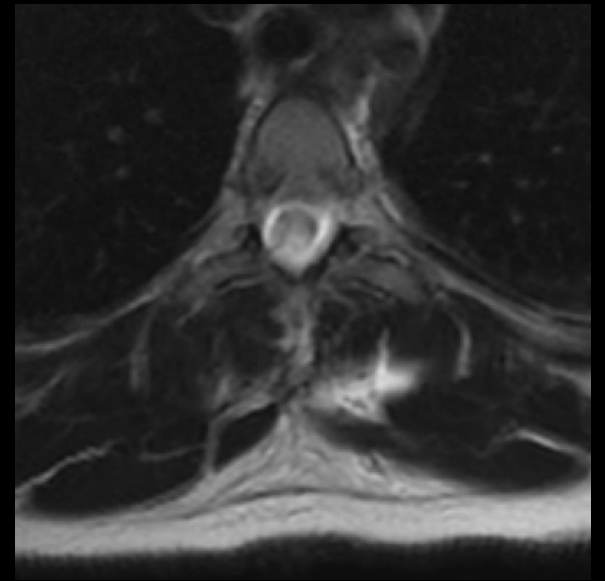
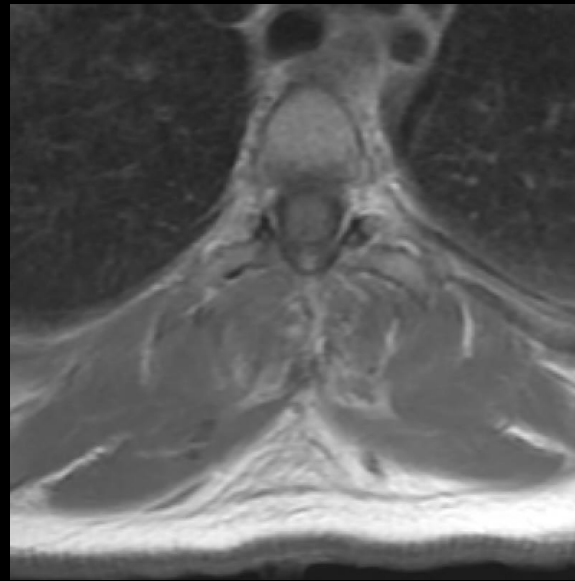
MR T1 + gad

MR T2

GTV1/CTV1



GTV2/CTV2



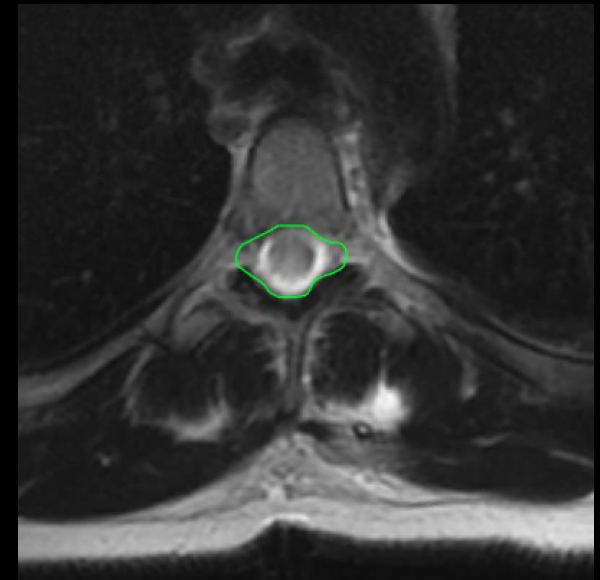
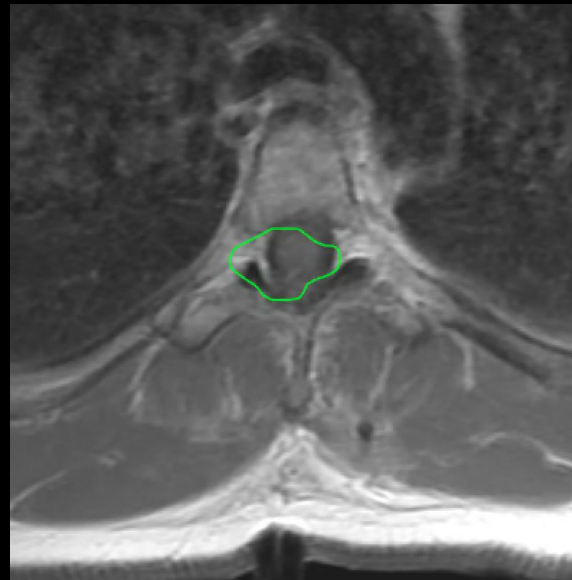
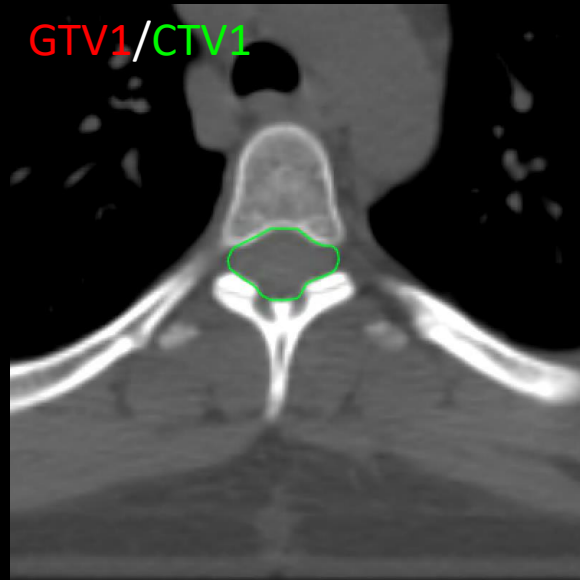
AXIAL

CT

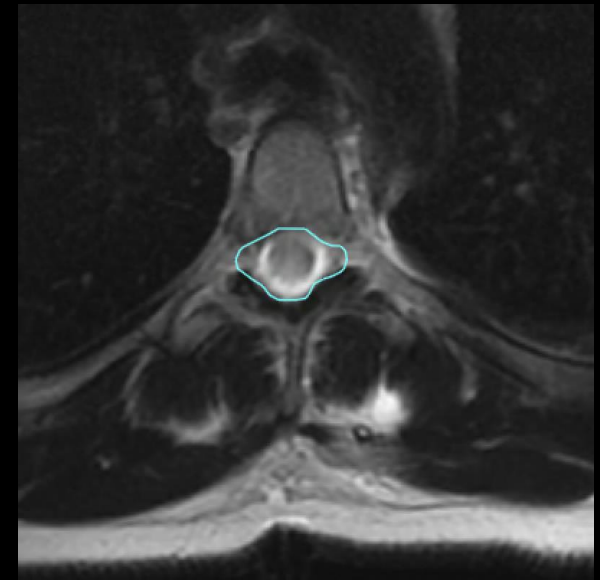
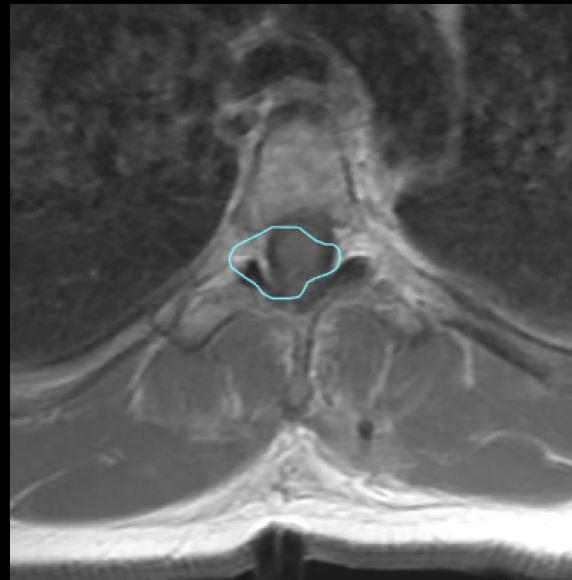
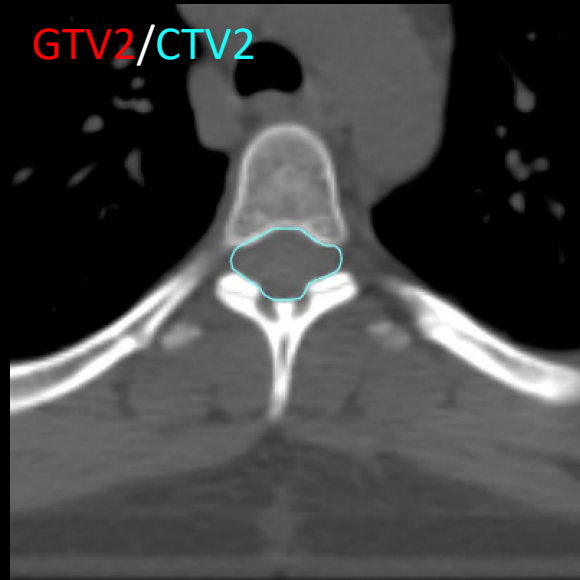
MR T1 + gad

MR T2

GTV1/CTV1



GTV2/CTV2



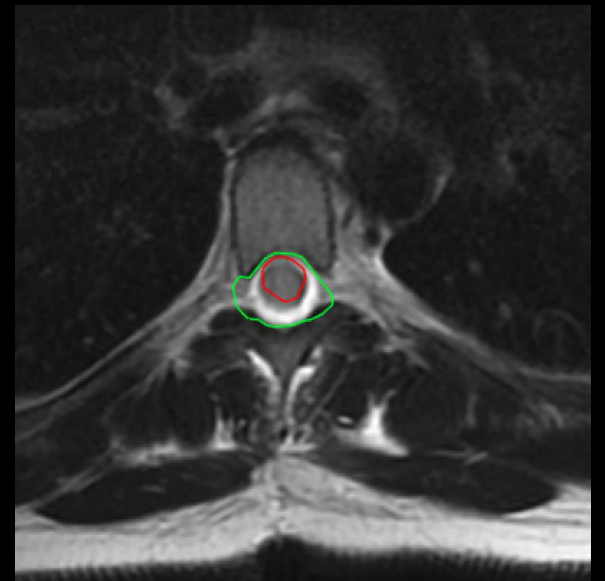
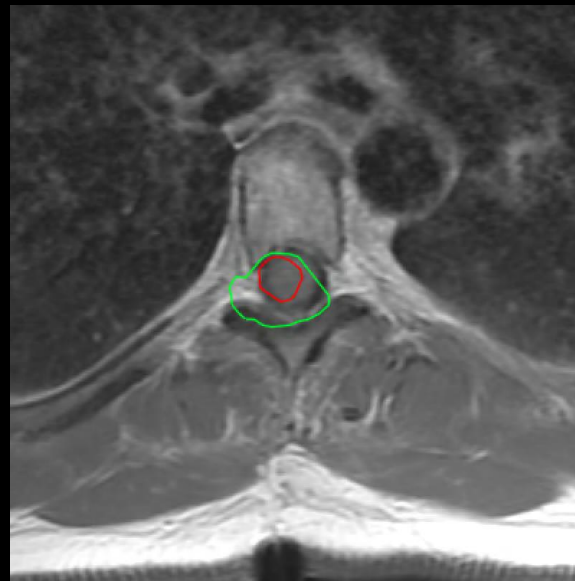
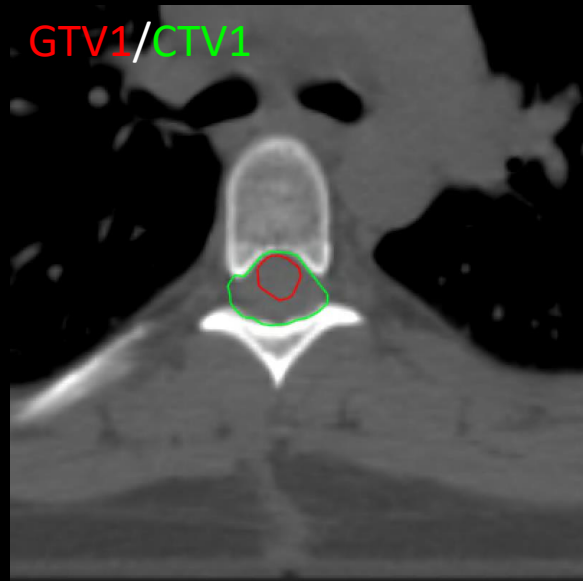
AXIAL

CT

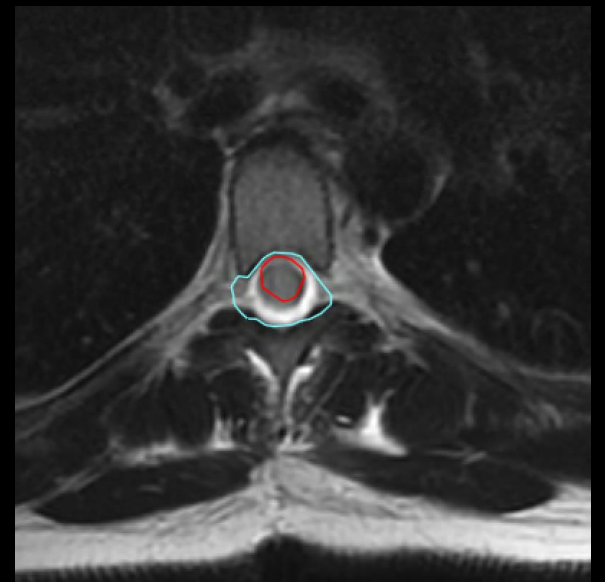
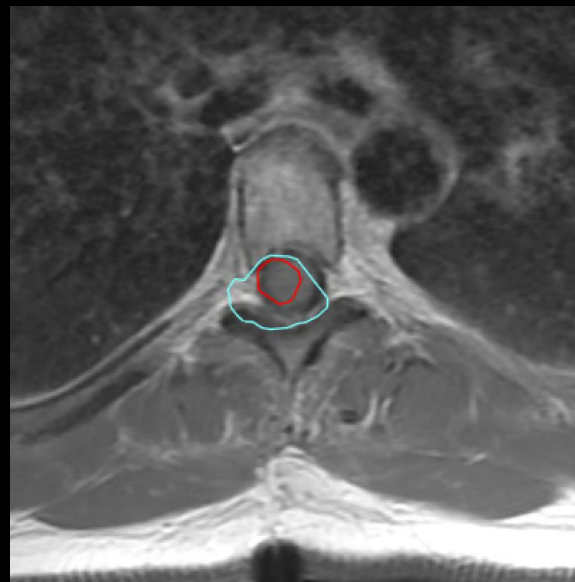
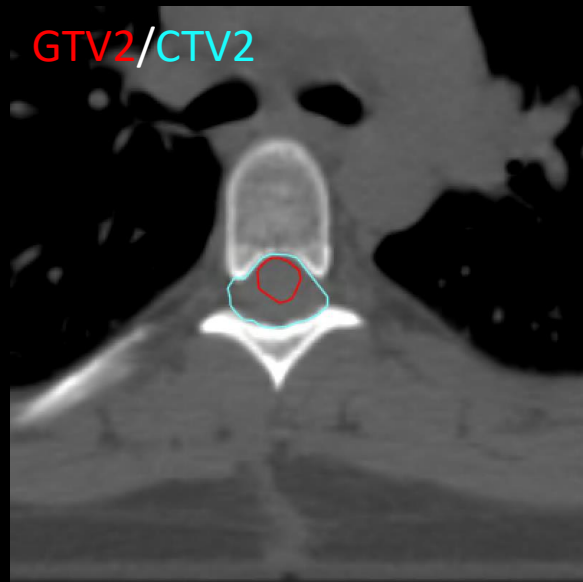
MR T1 + gad

MR T2

GTV1/CTV1



GTV2/CTV2



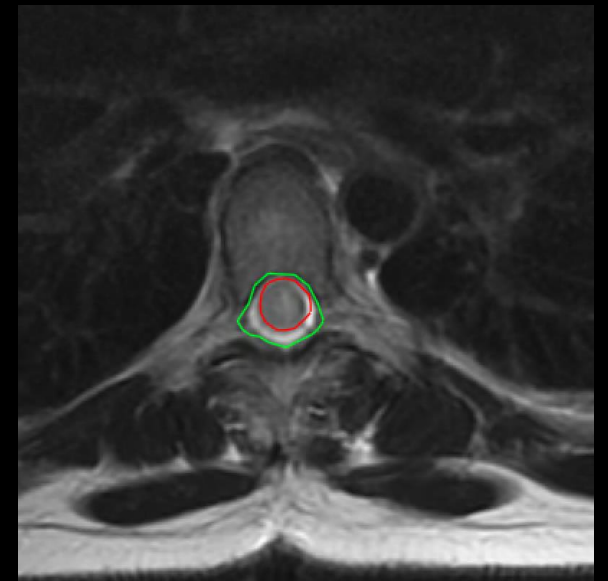
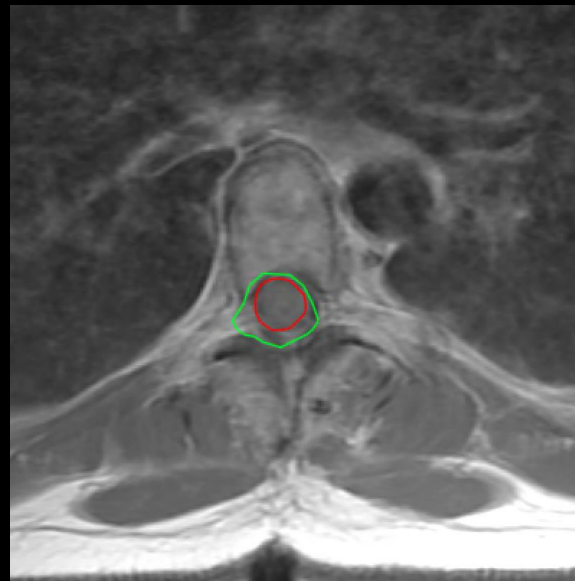
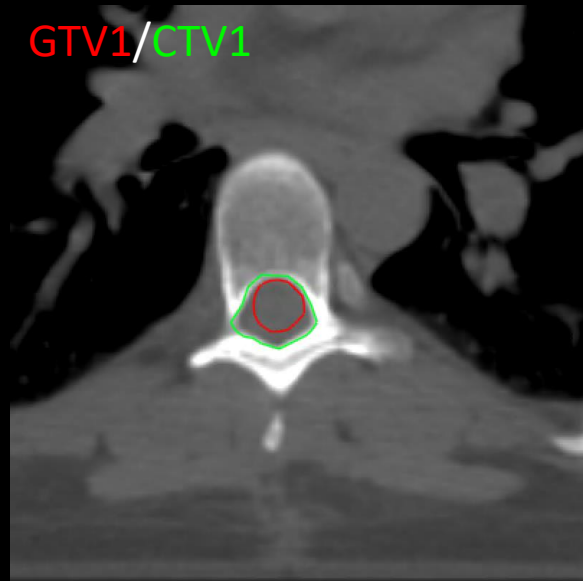
AXIAL

CT

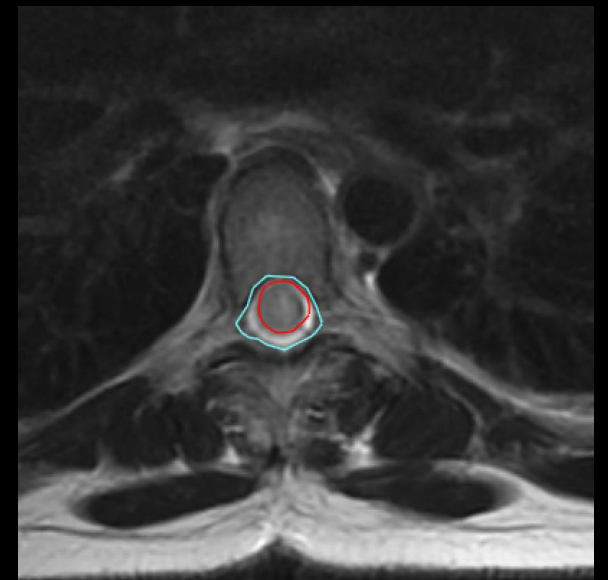
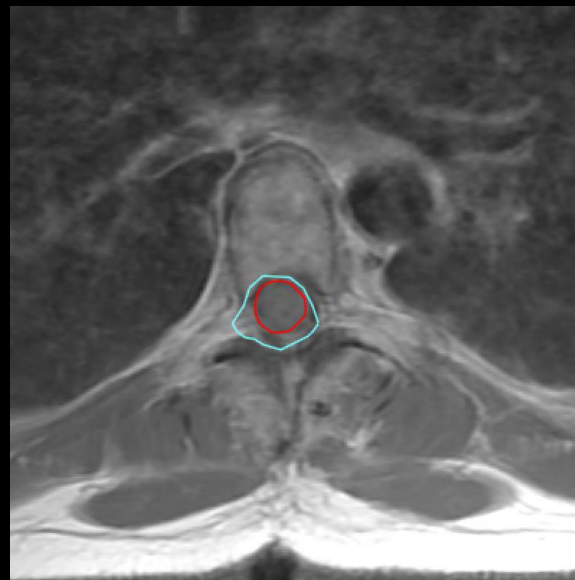
MR T1 + gad

MR T2

GTV1/CTV1



GTV2/CTV2



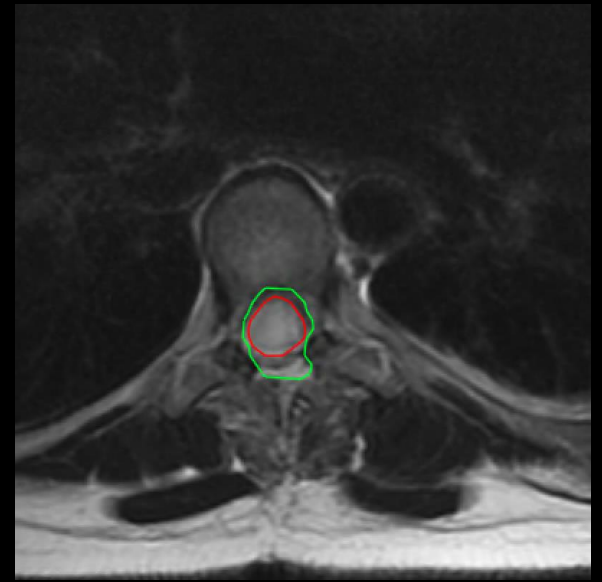
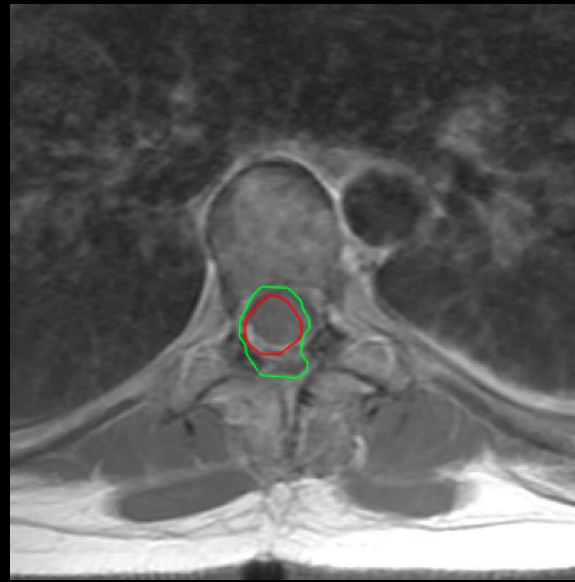
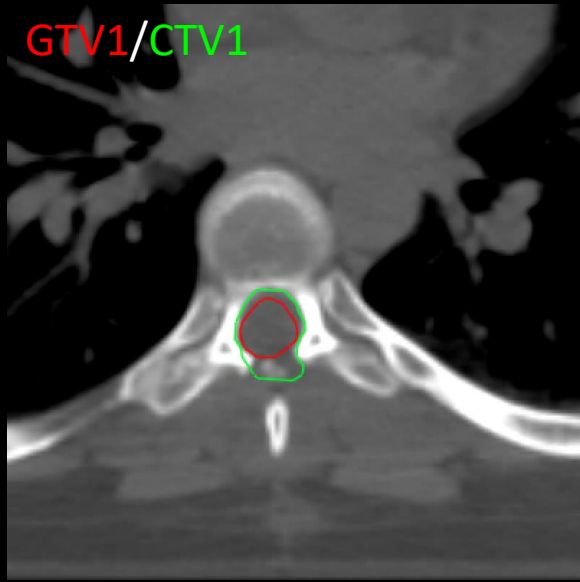
AXIAL

CT

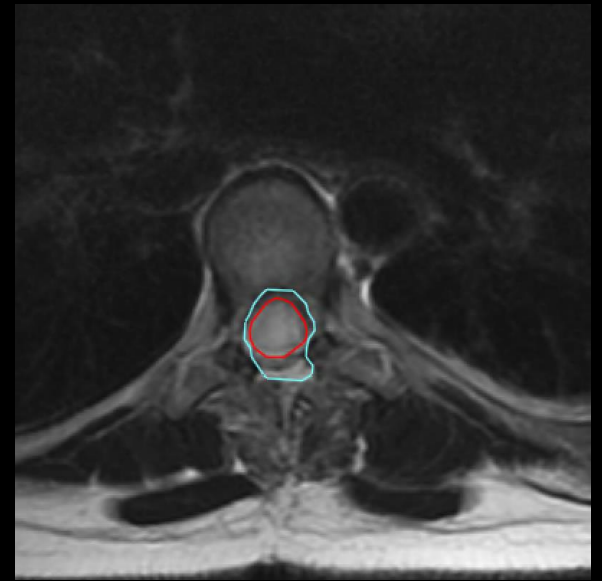
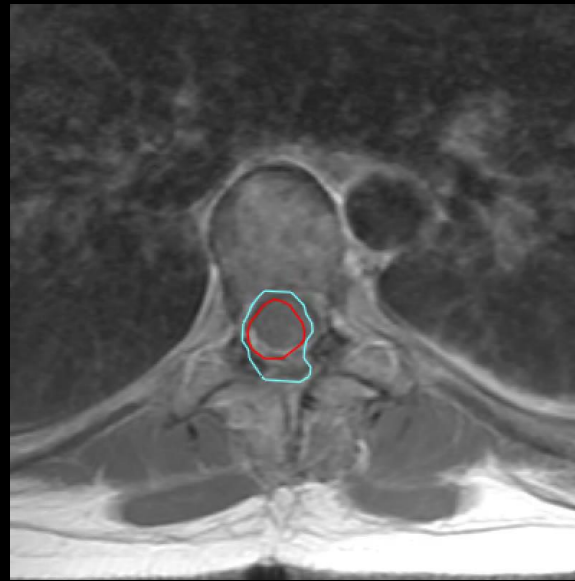
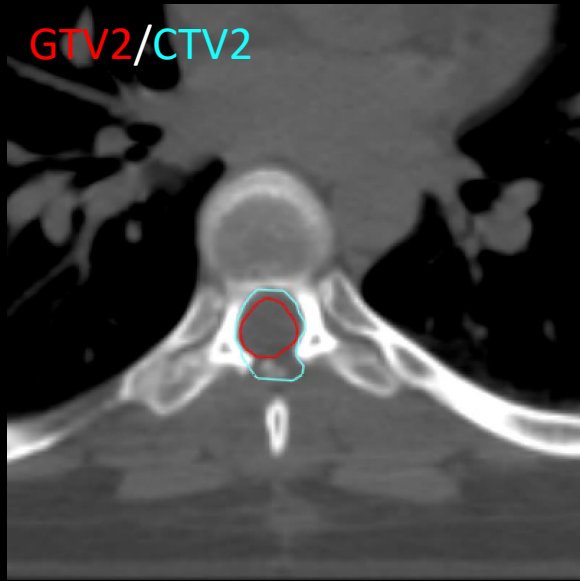
MR T1 + gad

MR T2

GTV1/CTV1



GTV2/CTV2



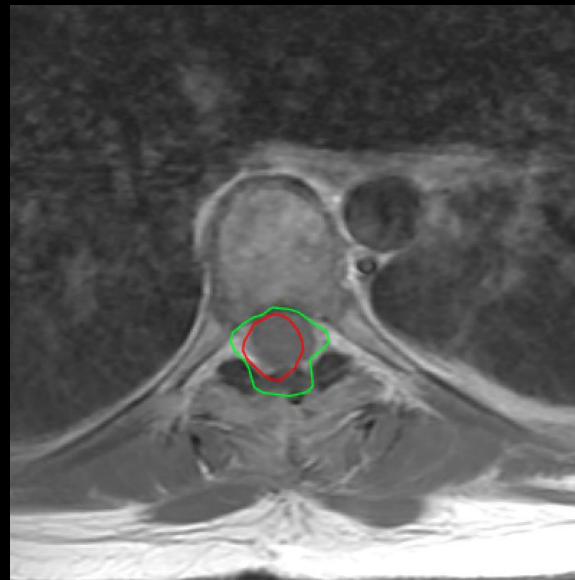
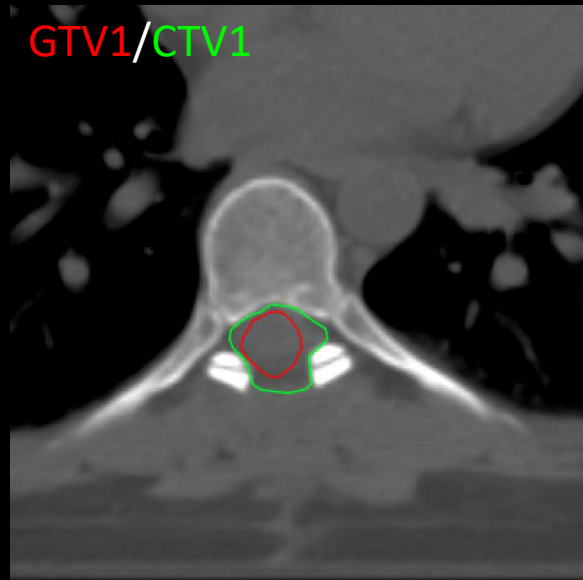
AXIAL

CT

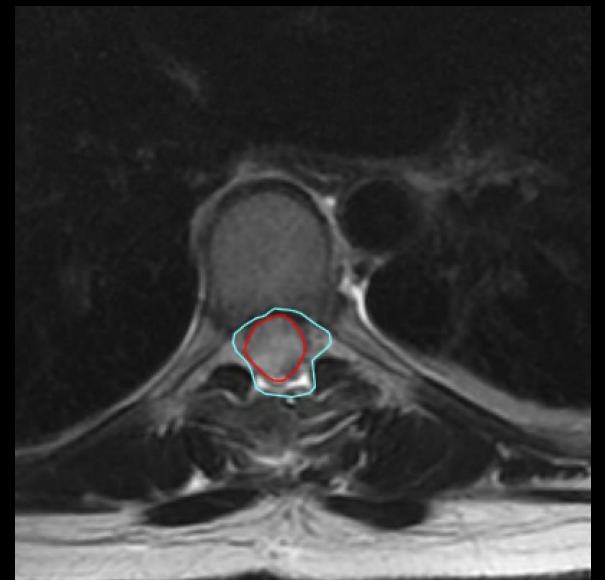
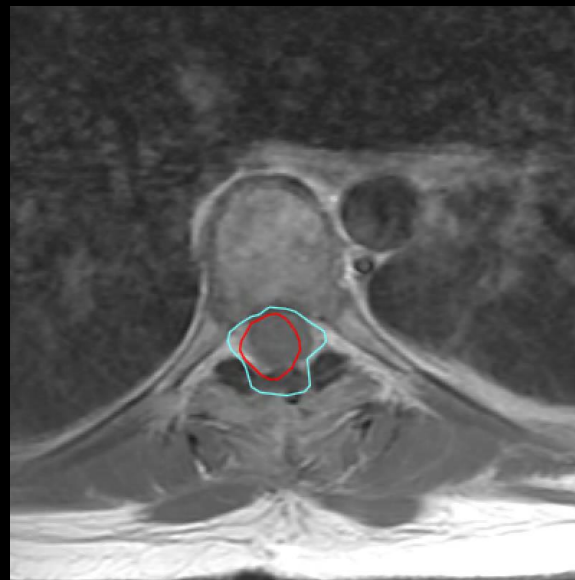
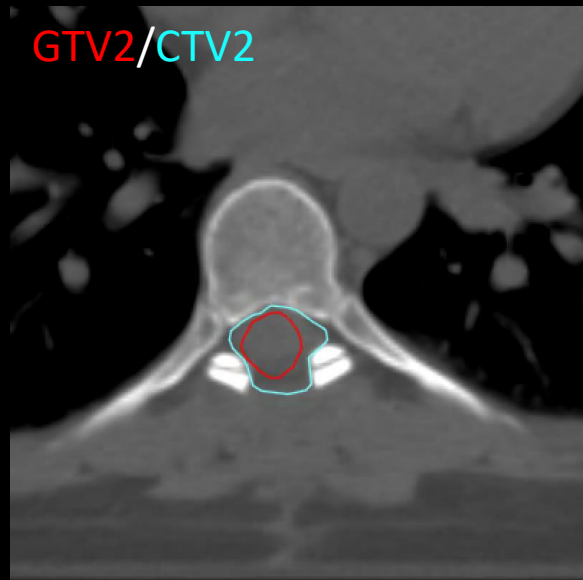
MR T1 + gad

MR T2

GTV1/CTV1



GTV2/CTV2



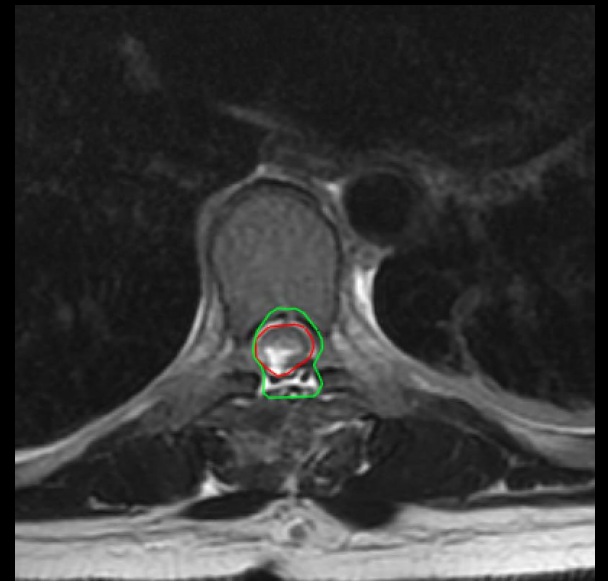
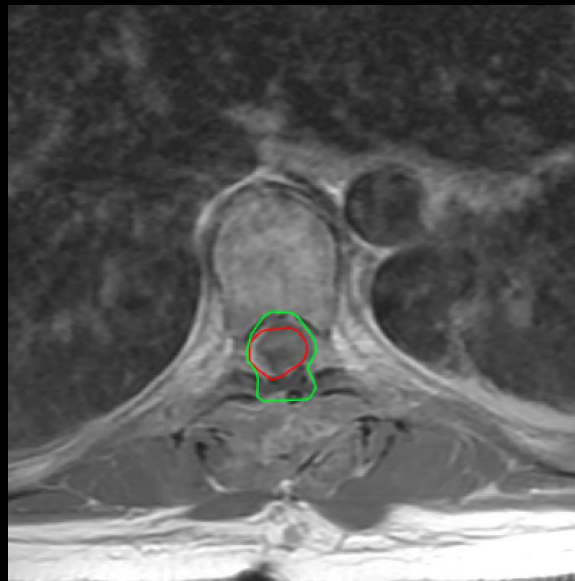
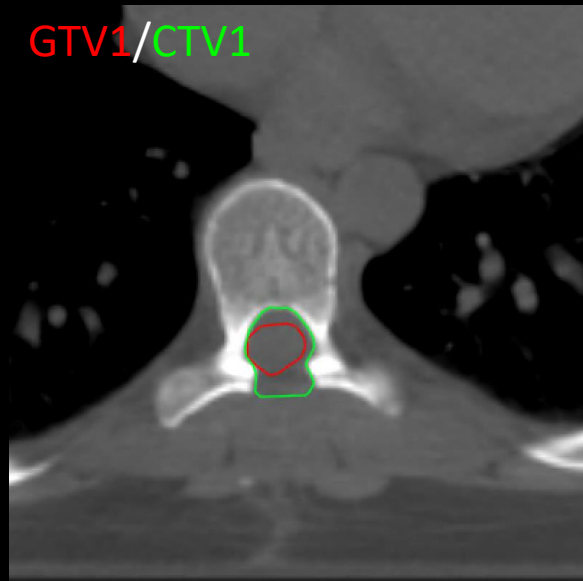
AXIAL

CT

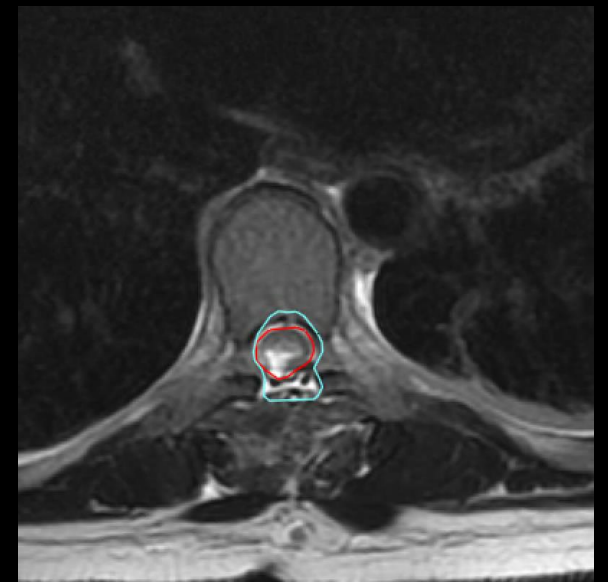
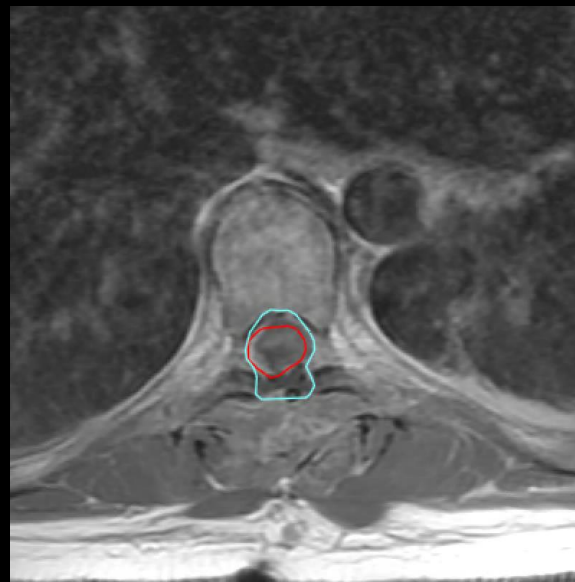
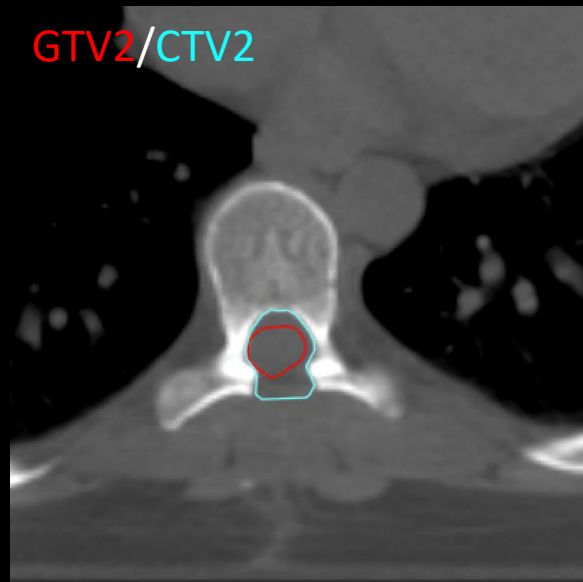
MR T1 + gad

MR T2

GTV1/CTV1



GTV2/CTV2



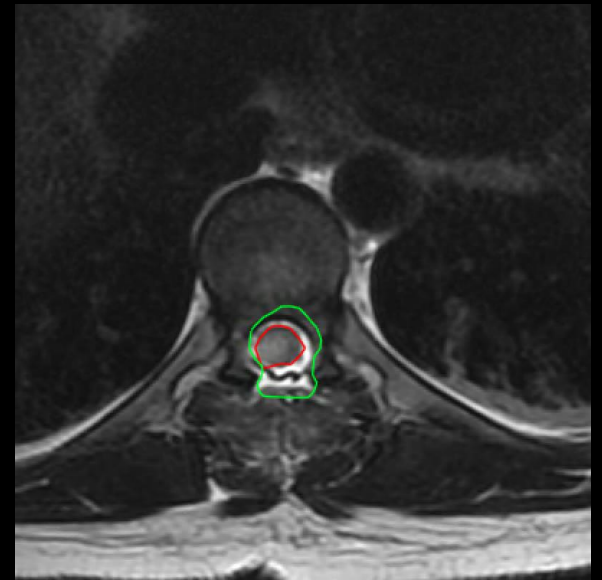
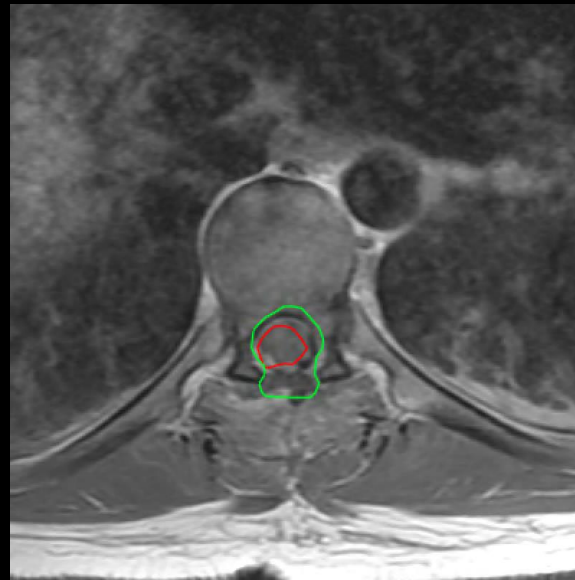
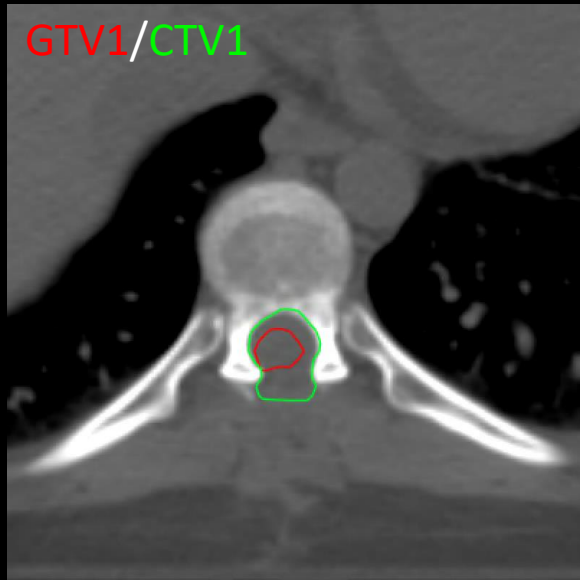
AXIAL

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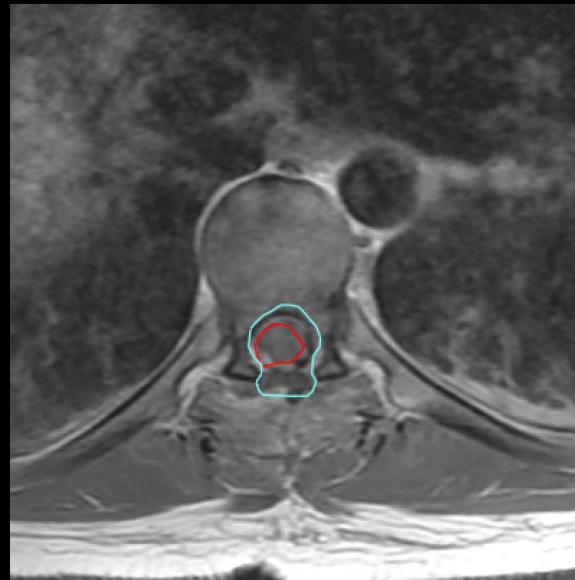
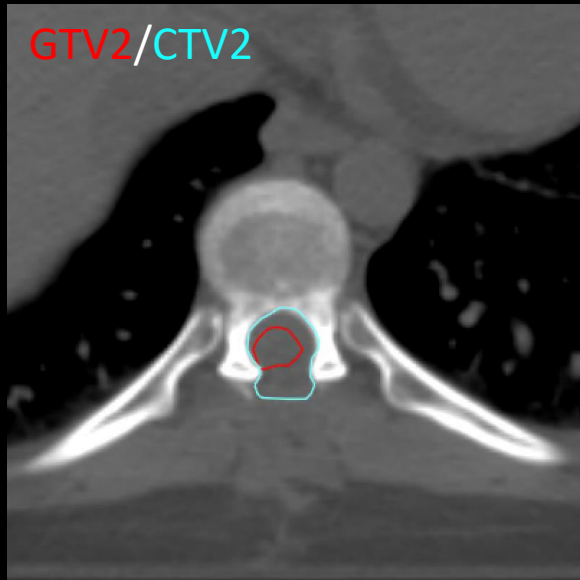
MR T1 + gad

MR T2

GTV1/CTV1



GTV2/CTV2



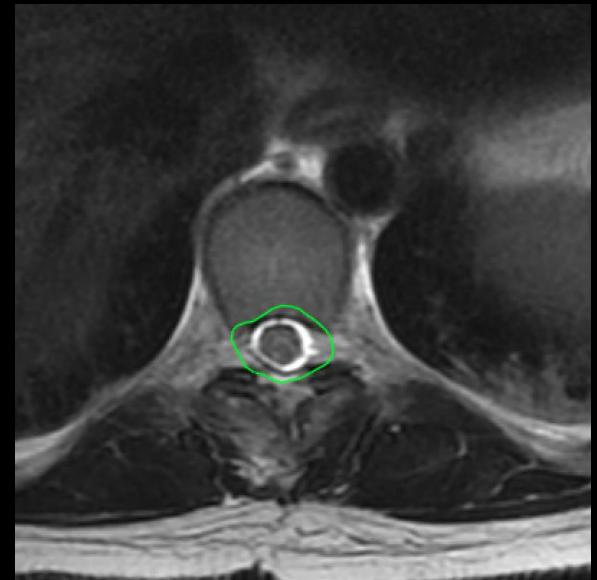
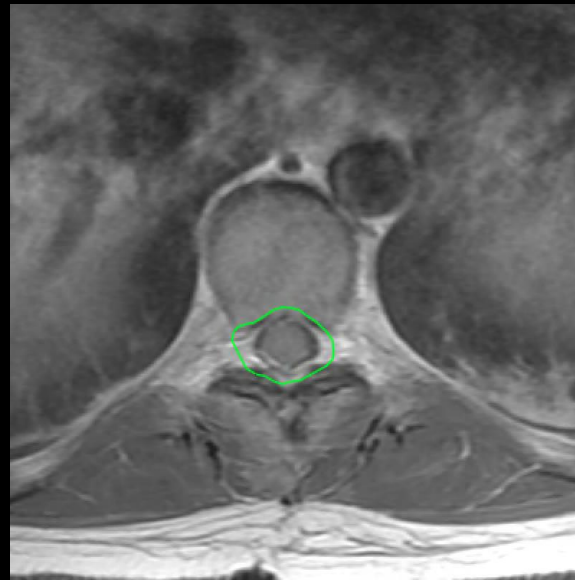
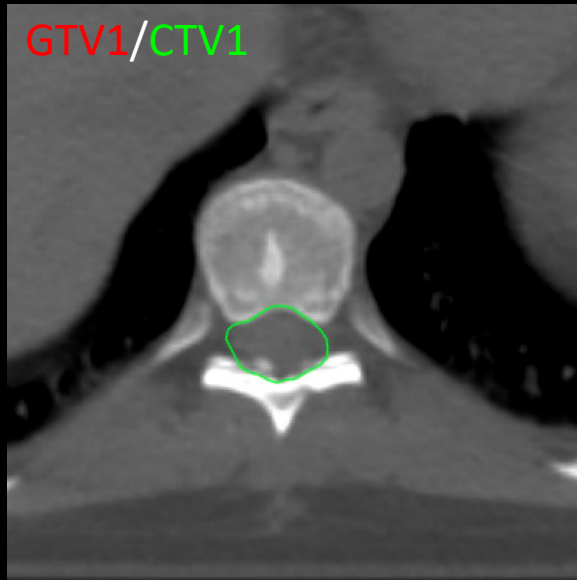
AXIAL

CT

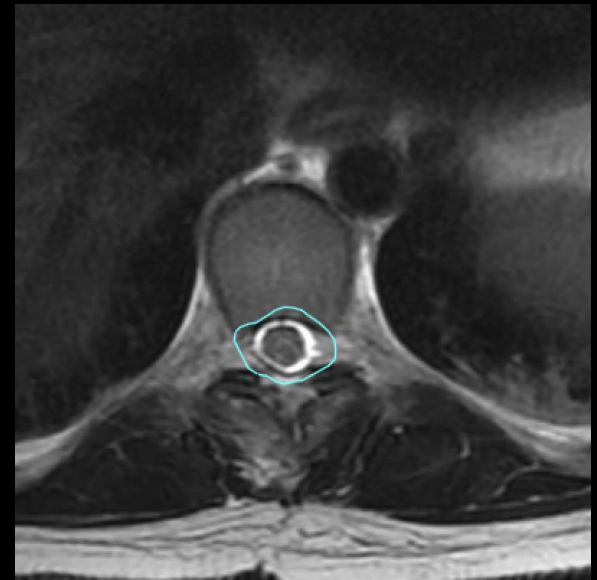
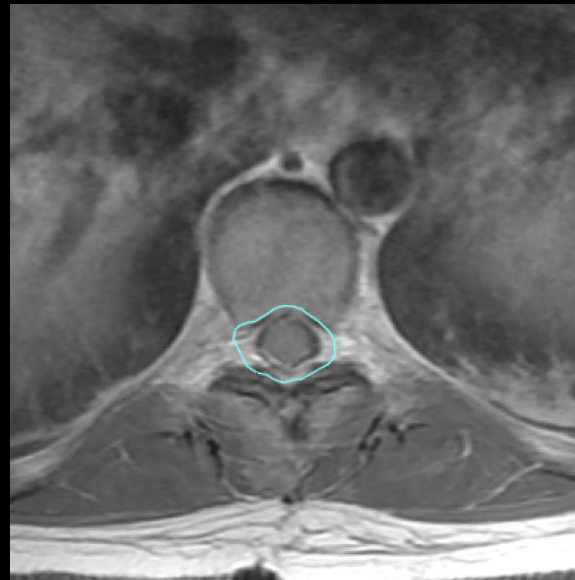
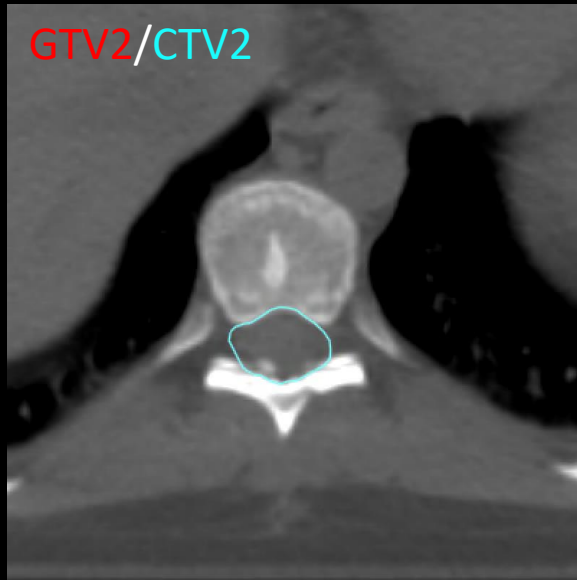
MR T1 + gad

MR T2

GTV1/CTV1



GTV2/CTV2



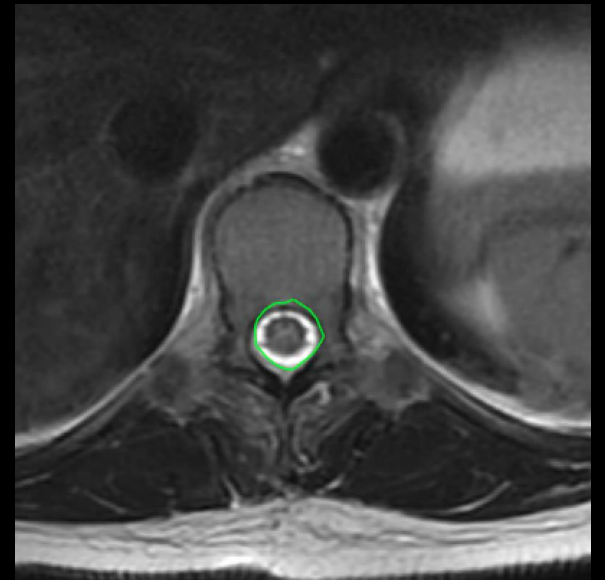
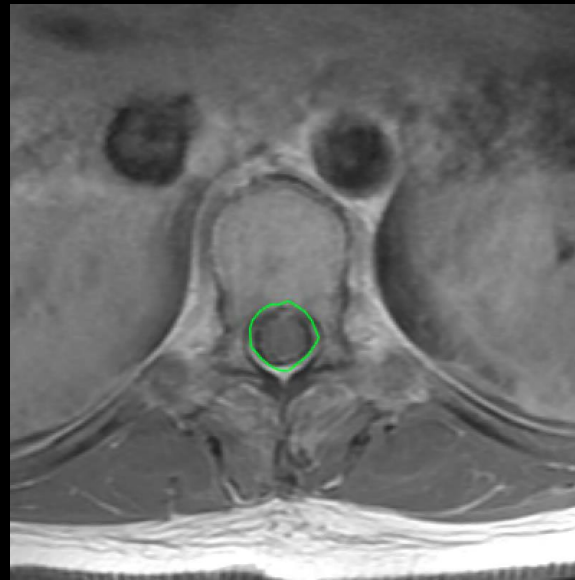
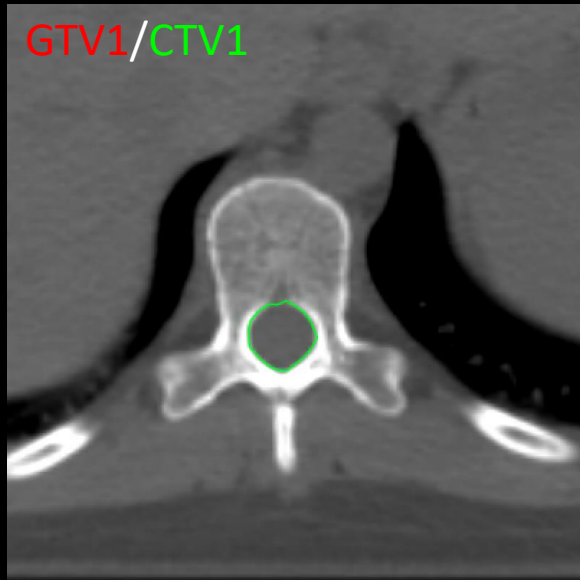
AXIAL

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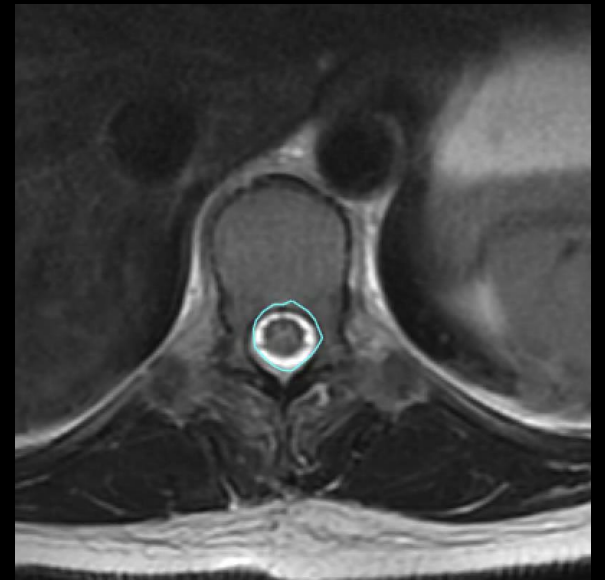
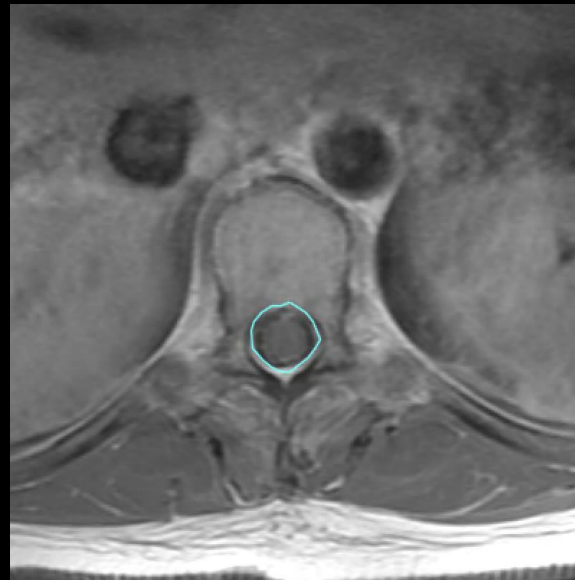
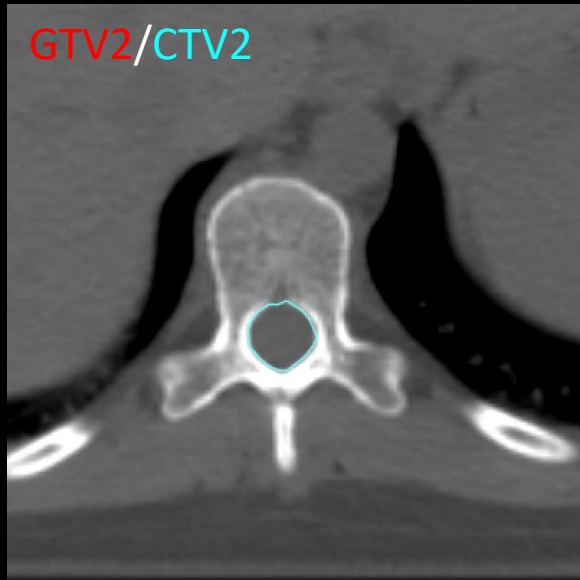
MR T1 + gad

MR T2

GTV1/CTV1



GTV2/CTV2



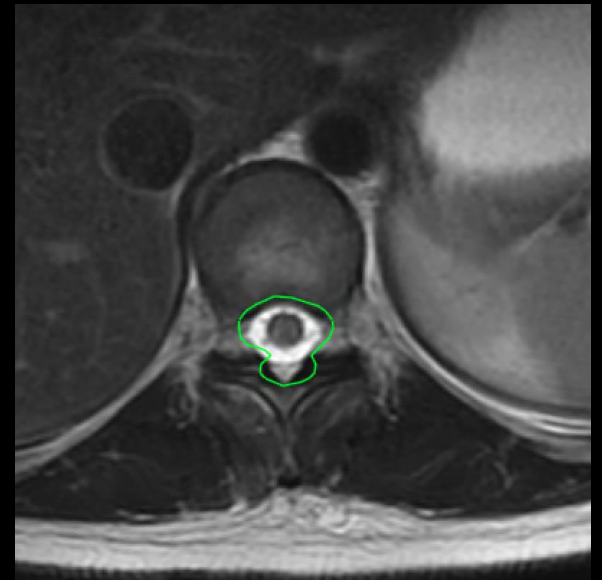
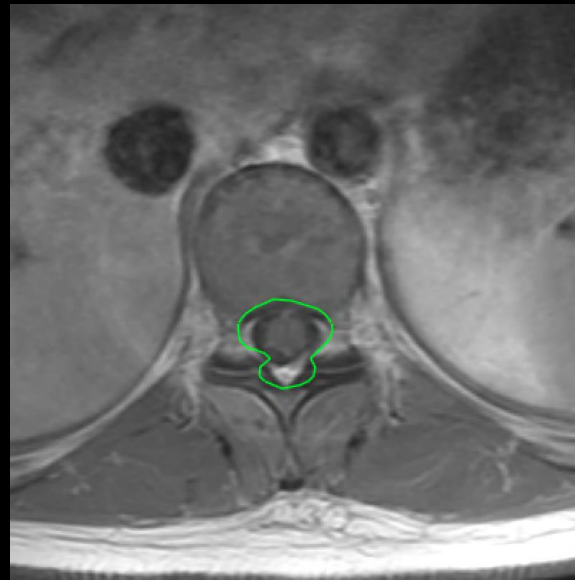
AXIAL

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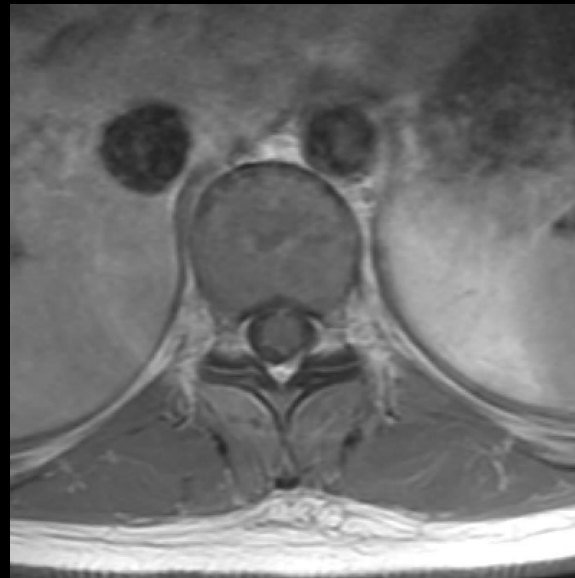
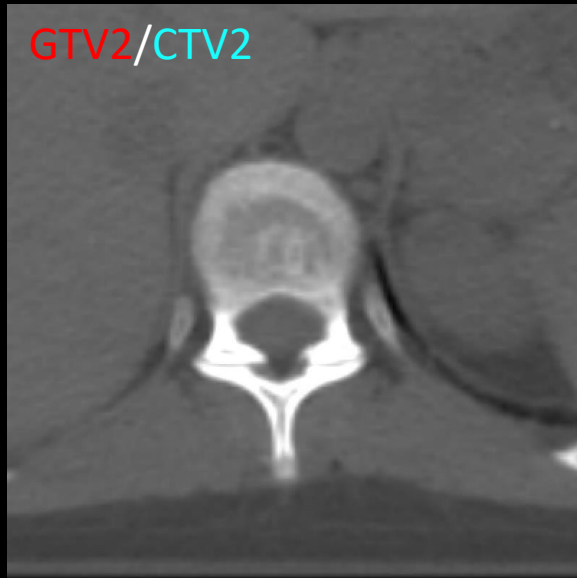
MR T1 + gad

MR T2

GTV1/CTV1



GTV2/CTV2



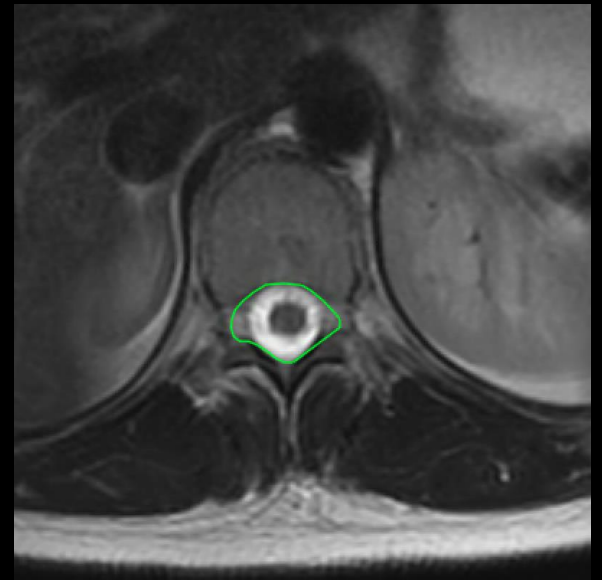
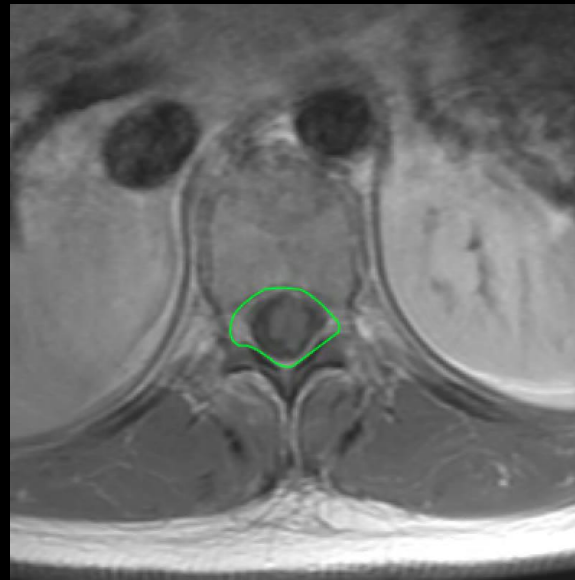
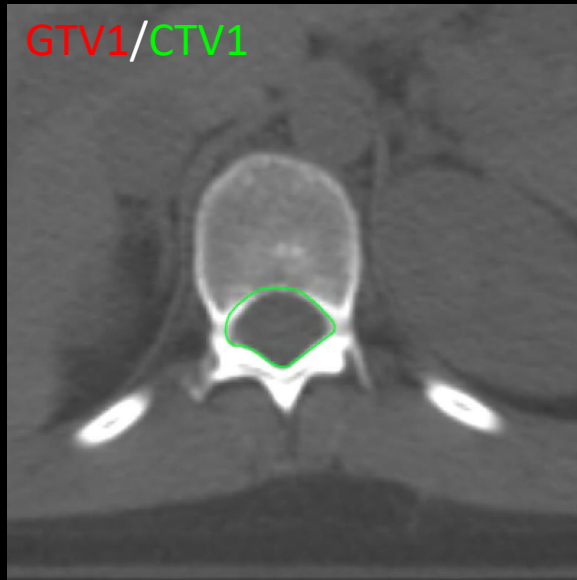
AXIAL

CT

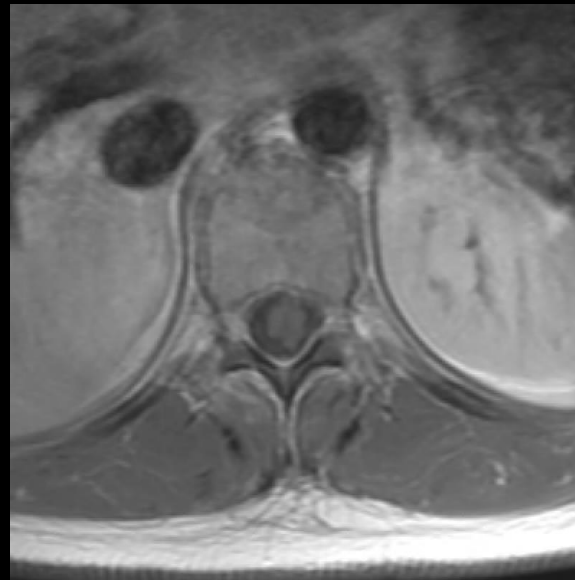
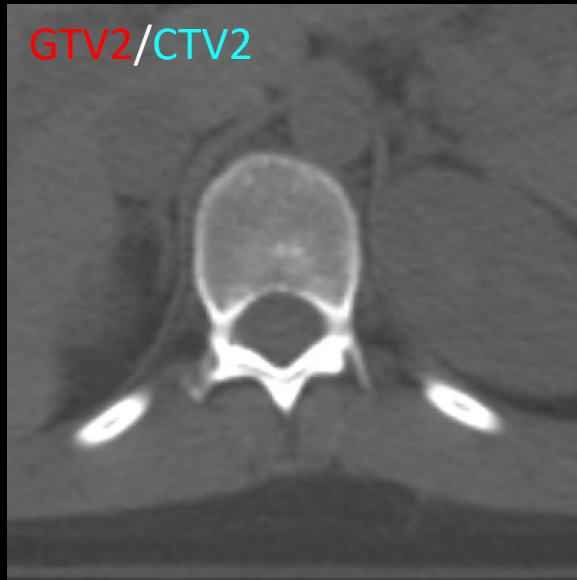
MR T1 + gad

MR T2

GTV1/CTV1



GTV2/CTV2



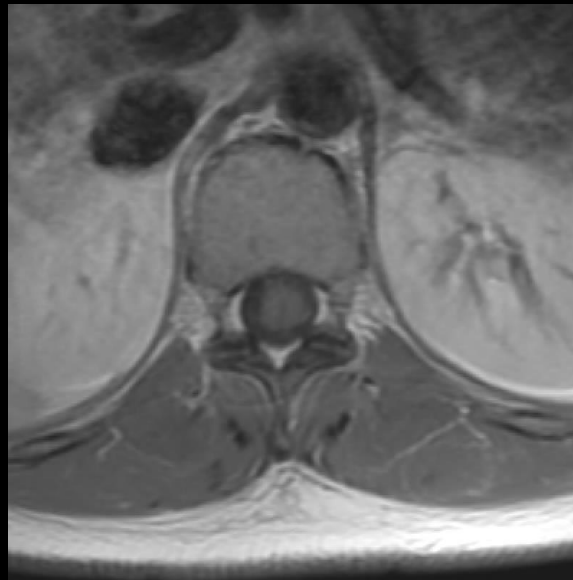
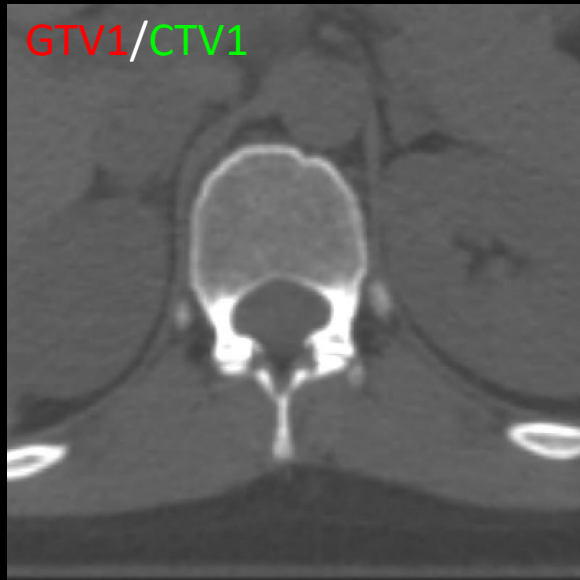
AXIAL

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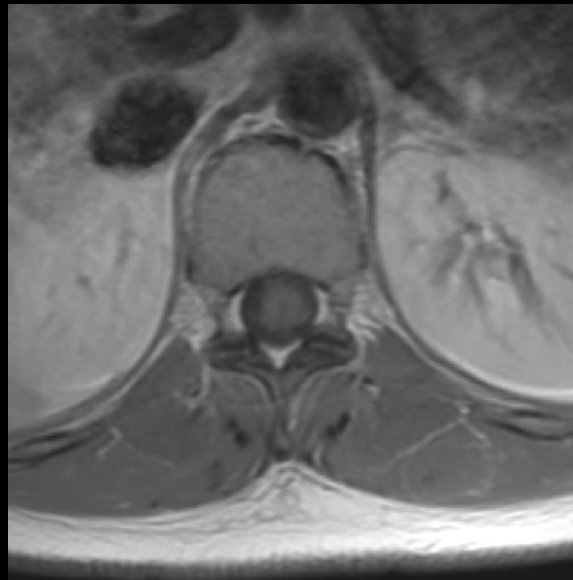
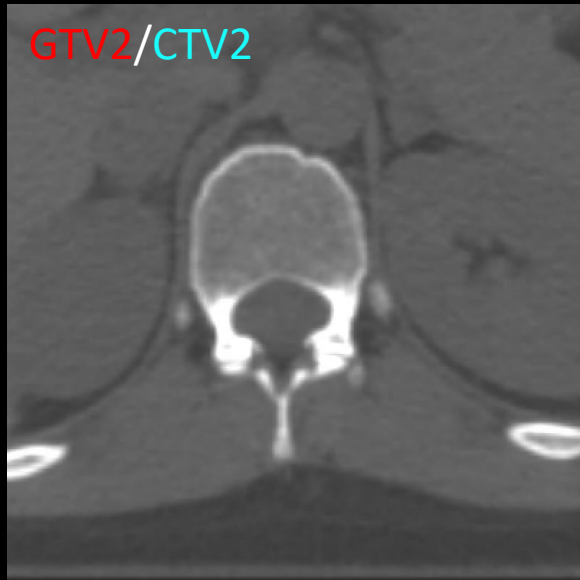
MR T1 + gad

MR T2

GTV1/CTV1



GTV2/CTV2



$$GTV1 = GTV2 / CTV1 / CTV2$$

CT

MR T1 + gad

MR T2

SAGITTAL

