

Whole Ventricle Target Volume Atlas for Germ Cell Tumors

Children's Oncology Group
Guide for Protocol
ACNS 1123

Collaborators

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Guidelines

- Please refer to protocol ACNS 1123 for full written guidelines

General Guidelines

- Planning CT should be fused to the most recent T2 MRI sequence for delineation of the whole ventricular volume (WVV)
- The WVV is considered a Clinical Target Volume (CTV)
- The involved field CTV should be delineated upfront and encompassed in the WVV volume to ensure full dose to the involved field boost

General Guidelines

- The *WVV* should encompass the lateral, third, and fourth ventricles
- Care should be taken to ensure the suprasellar and pineal cisterns are included in the *WVV*

General Guidelines

- Inclusion of the prepontine cistern is optional but should be considered for patients whom have undergone a third ventriculostomy and for patients with large suprasellar tumors
- When included, the prepontine cistern is part of the WVV (i.e. CTV)

General Guidelines

- Expand the WVVCTV geometrically by 3 or 5 mm to create the WVVPTV

Lateral Ventricles

- The lateral ventricles contain 3 horns; the frontal (anterior) horns, the temporal (inferior horns), and the occipital (posterior) horns
- The lateral ventricles connect to the third ventricle through the foramina of Monro

Third Ventricle

- Midline between lateral ventricles
- Communicates with the lateral ventricles through the foramina of Monro
- Communicates with the 4th ventricle through the cerebral aqueduct (of Sylvias)
- Anterior floor is a barrier to the prepontine cistern that is opened by a third ventriculostomy procedure

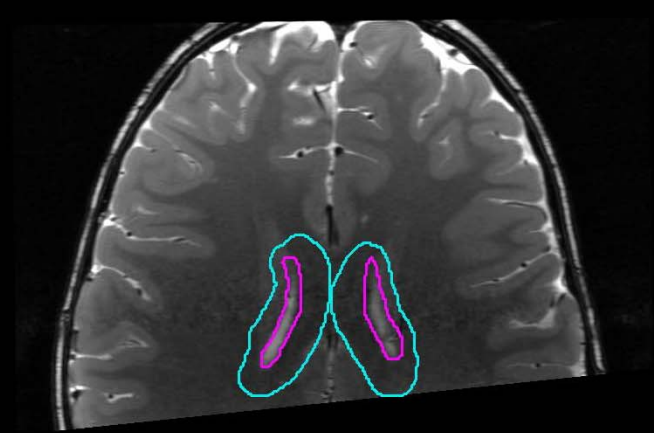
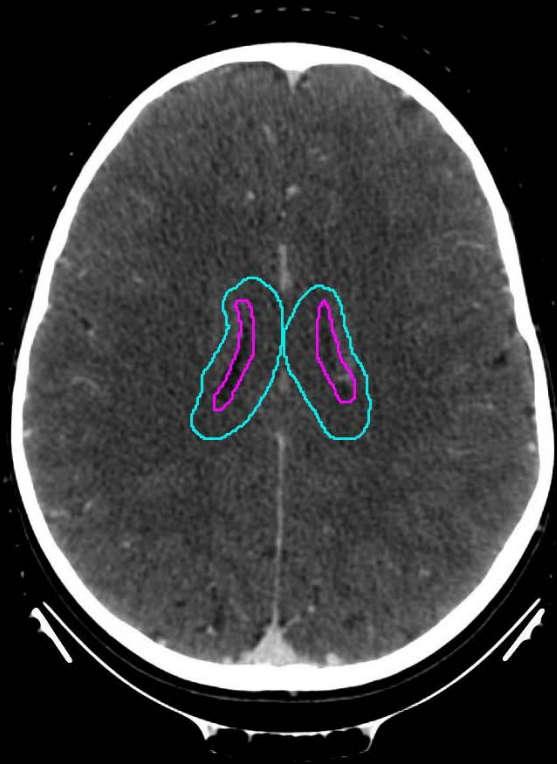
Third Ventricle

- The third ventricle protrudes anteriorly to form the supraoptic and infundibular recesses (suprasellar cistern)
- The third ventricle protrudes posteriorly to form the suprapineal and pineal recesses (pineal cistern)

Fourth Ventricle

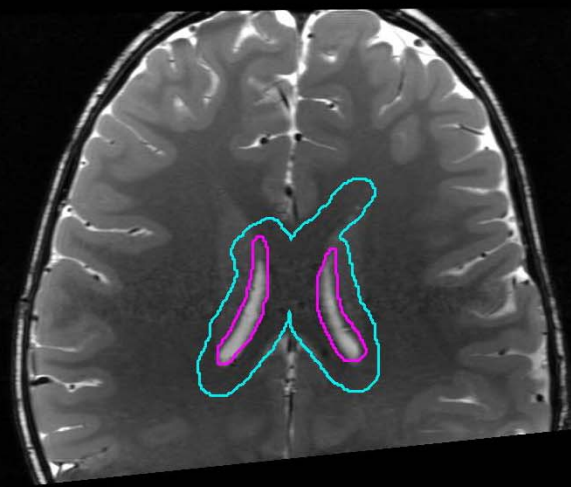
- Communicates with the 3th ventricle through the cerebral aqueduct (of Sylvias)
- Communicates with the prepontine space through the foramina of Luschka
- Communicates with the spinal canal through the foramen of Magendie

■ WVVCTV
■ WVVPTV

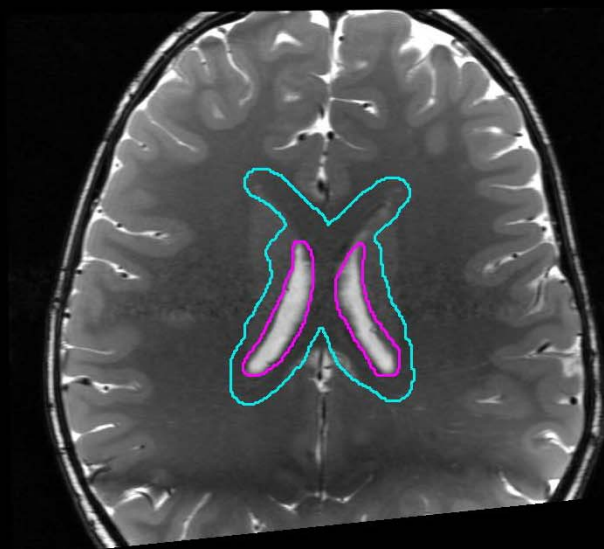
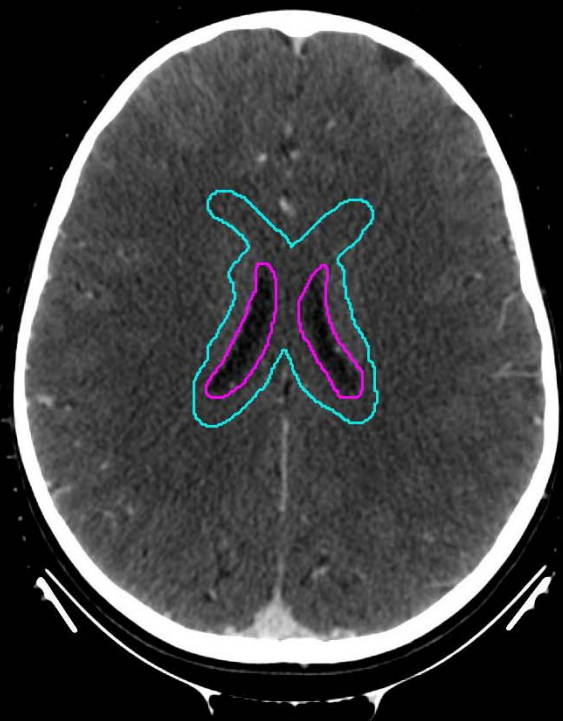


lateral ventricles

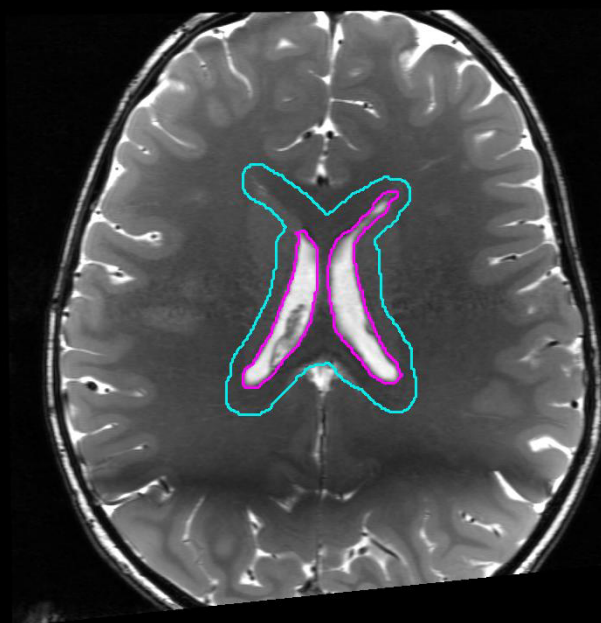
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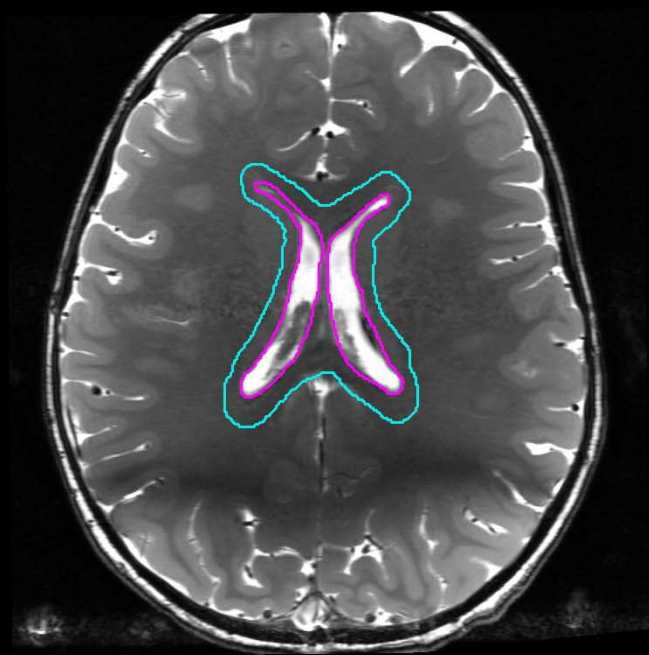
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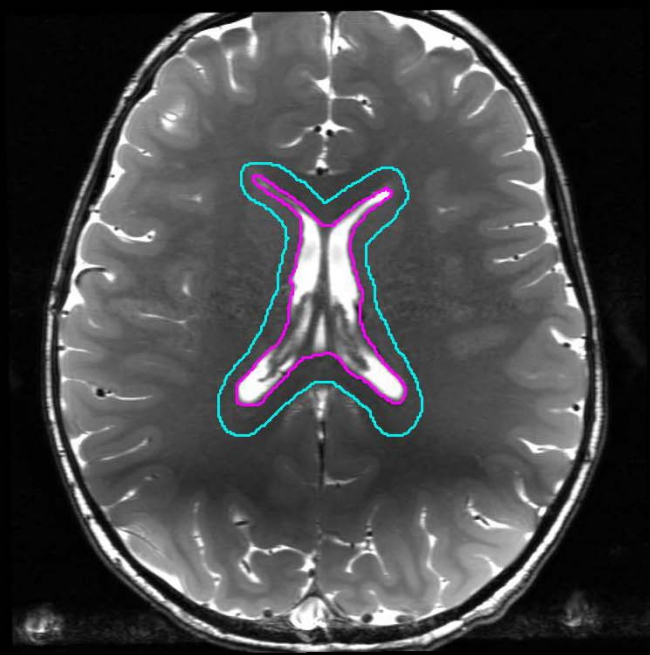
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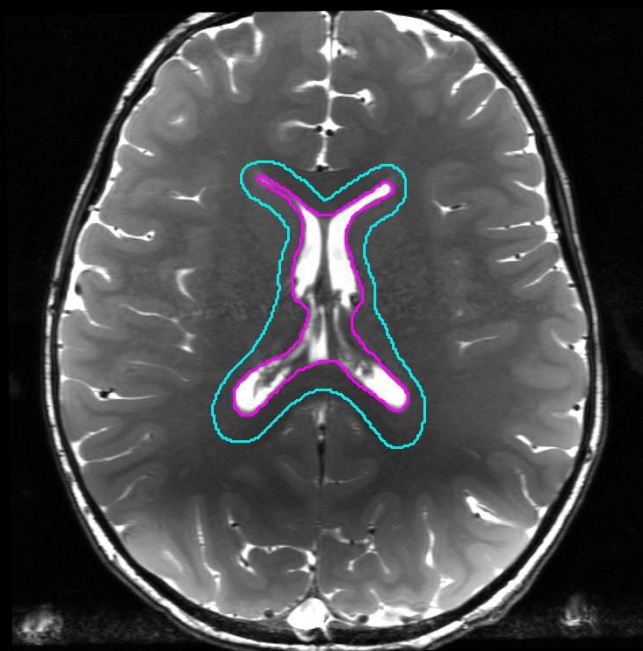
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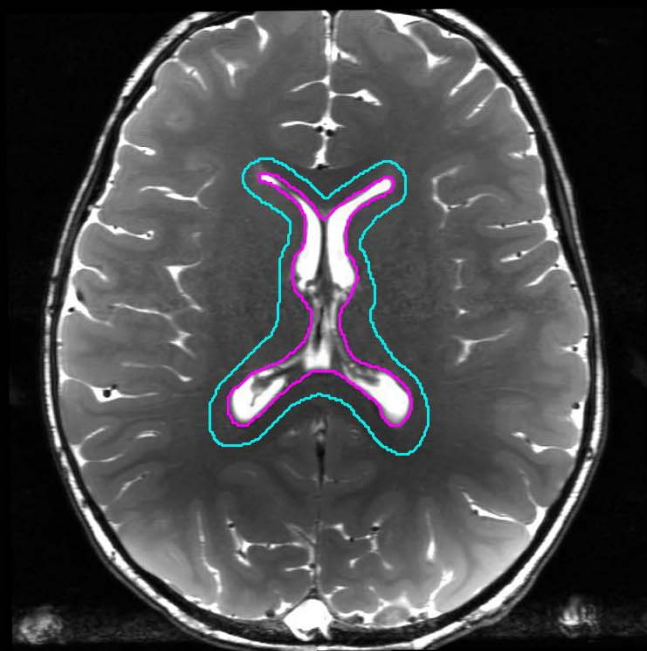
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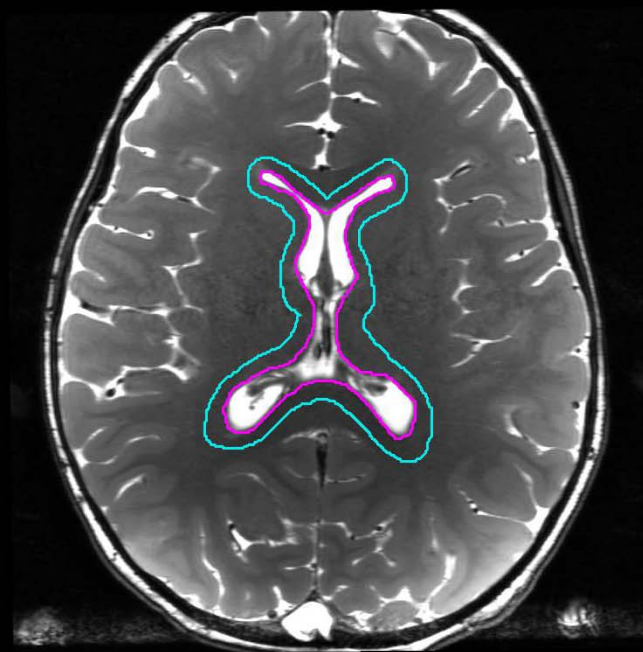
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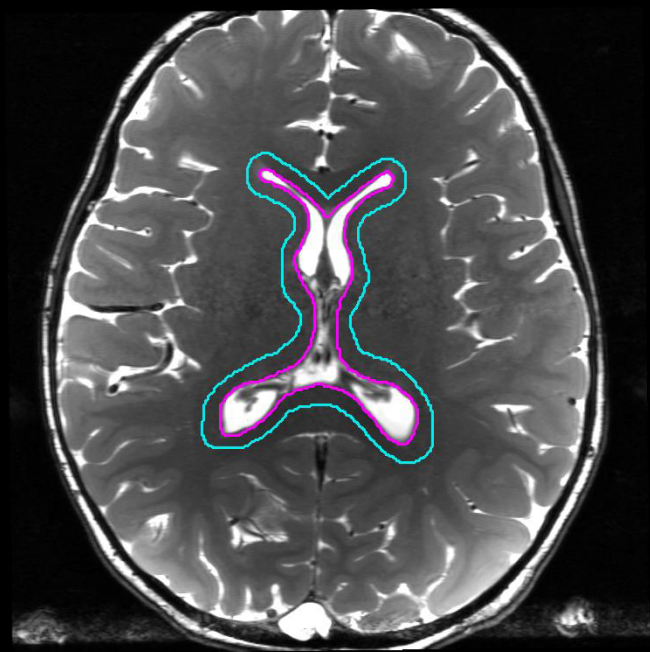
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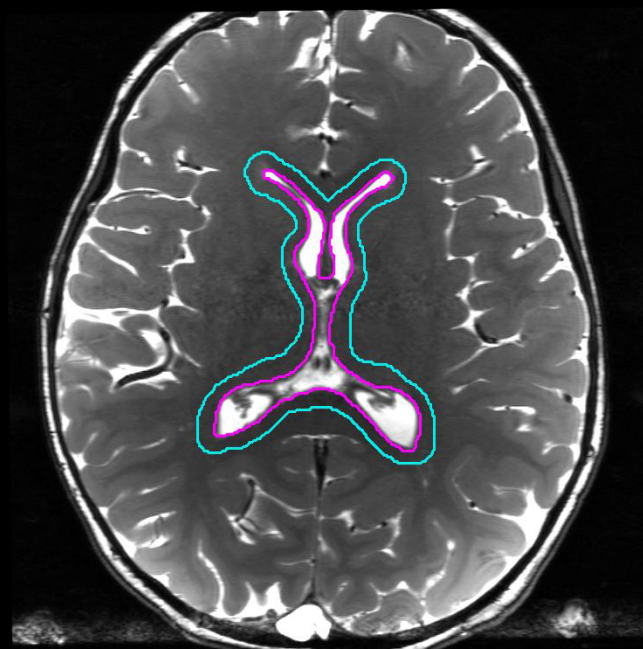
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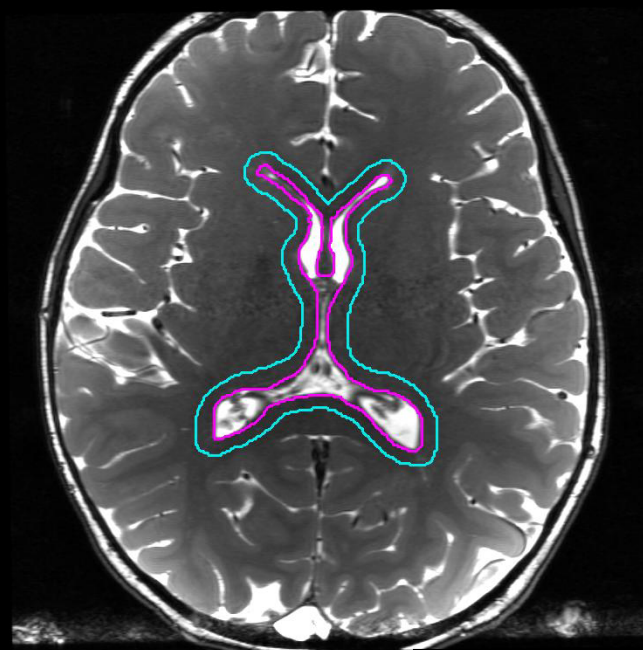
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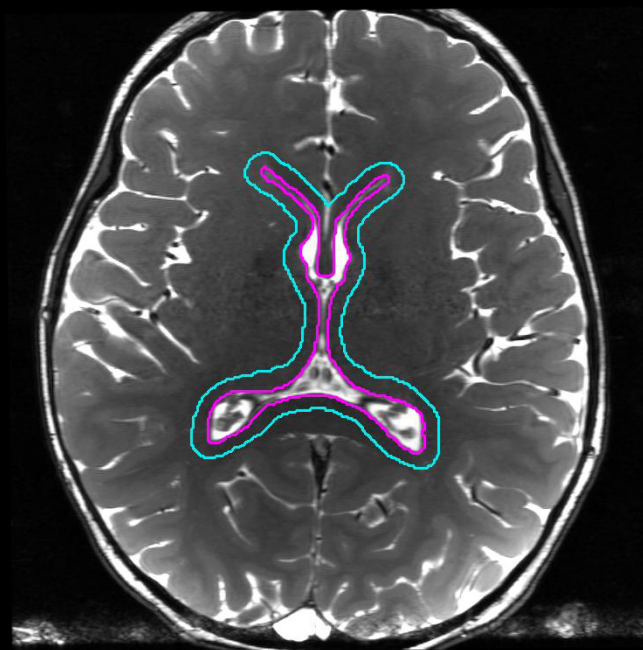
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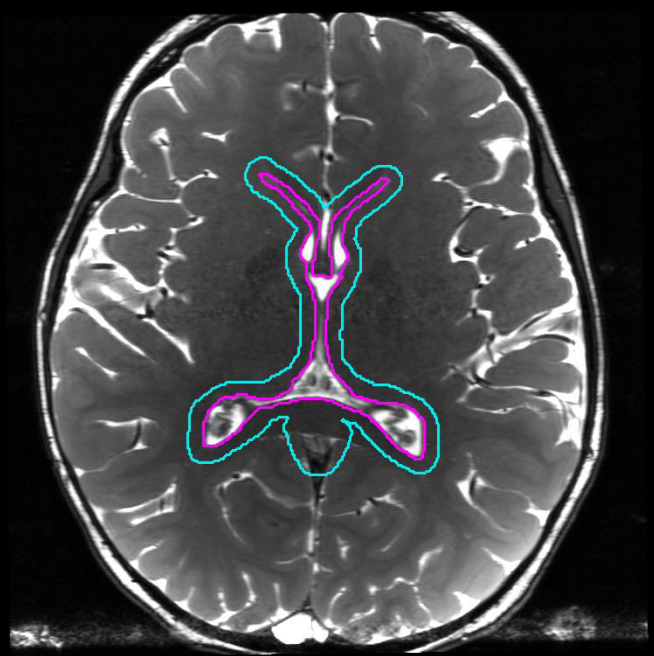
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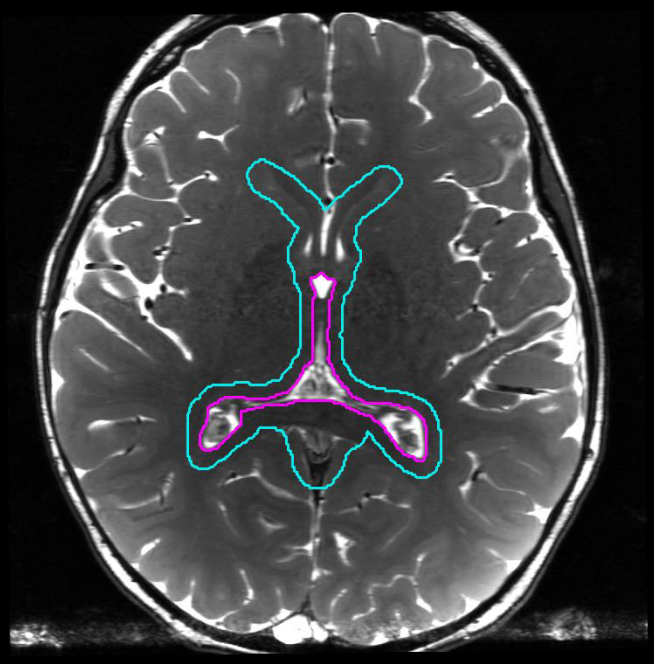
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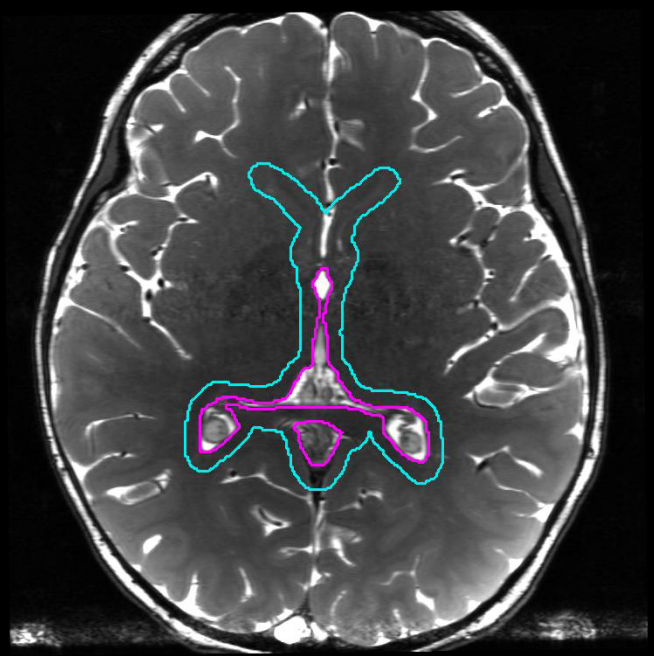
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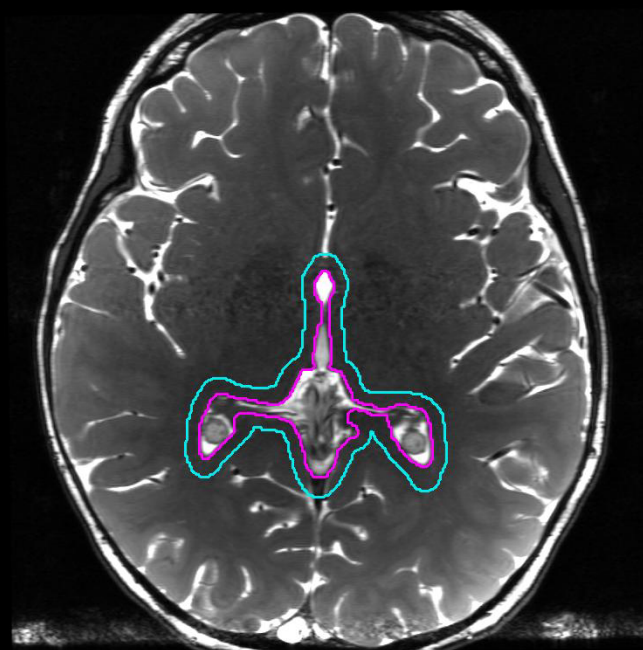
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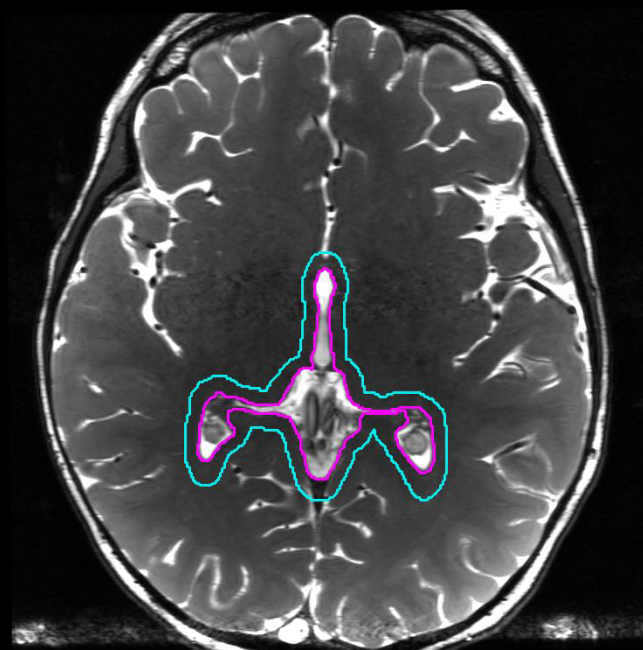


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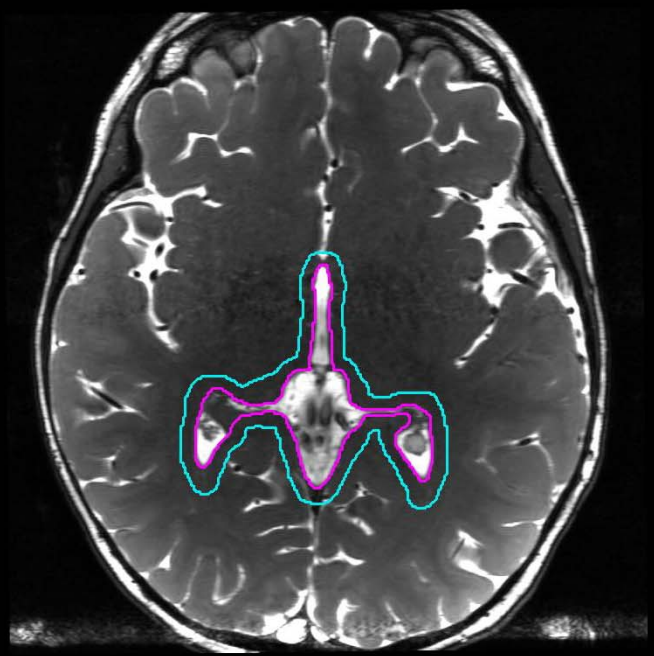


third ventricle, region of pineal cistern

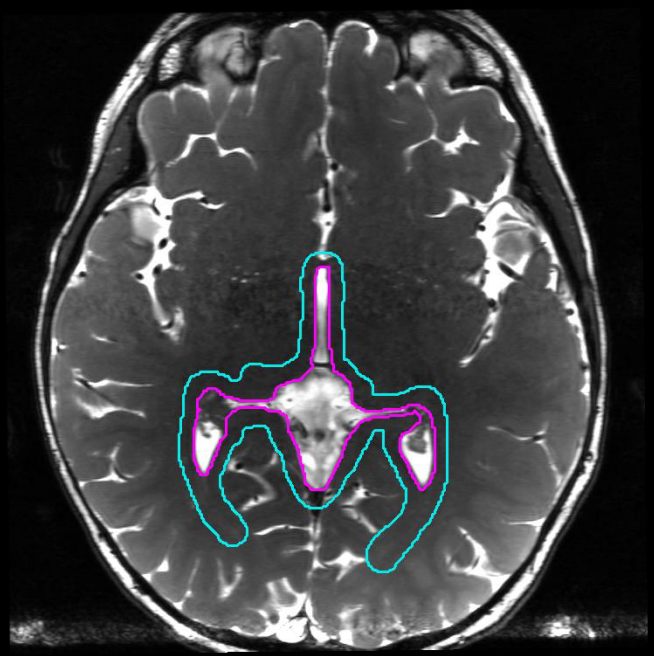
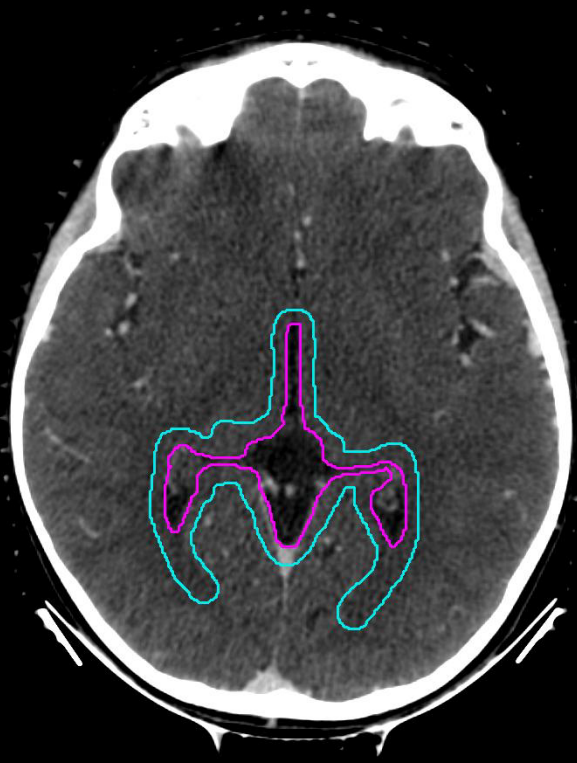
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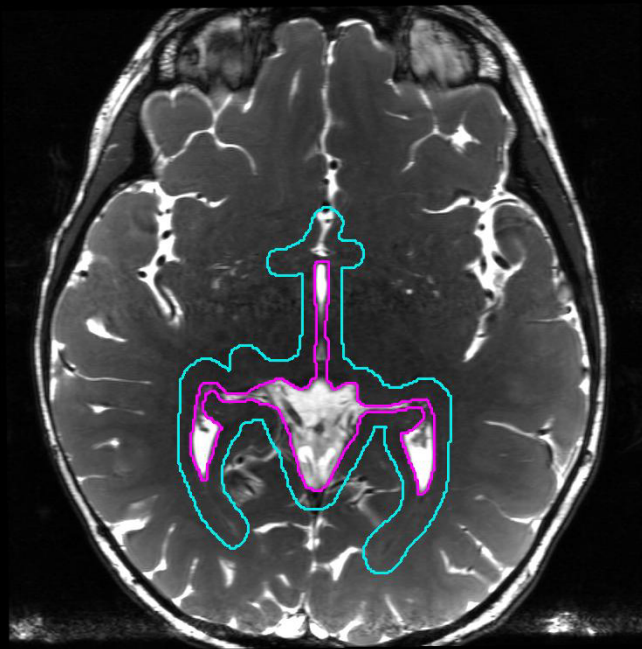
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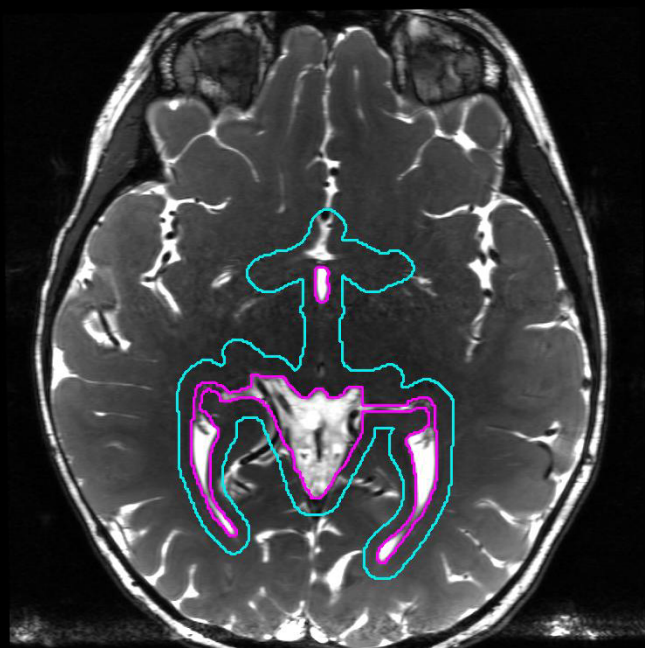
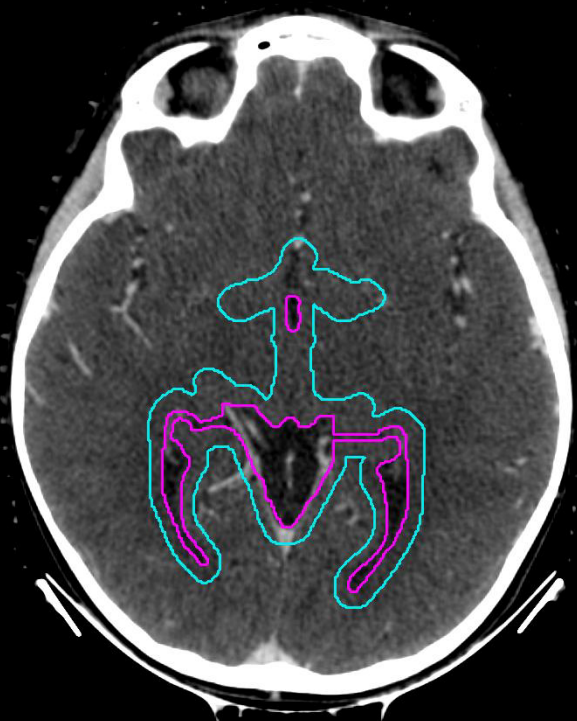
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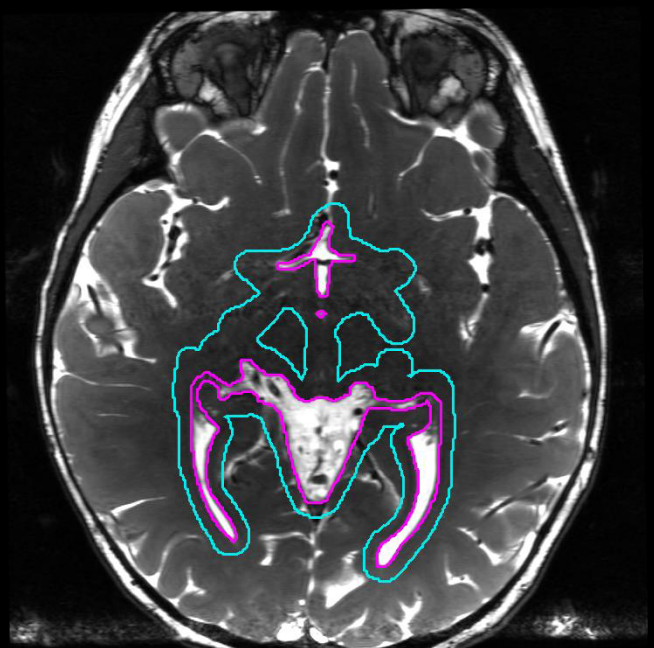


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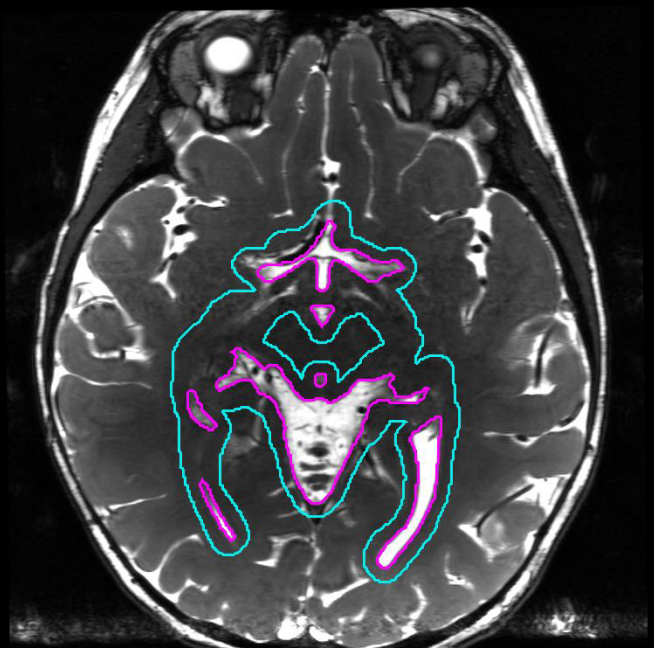
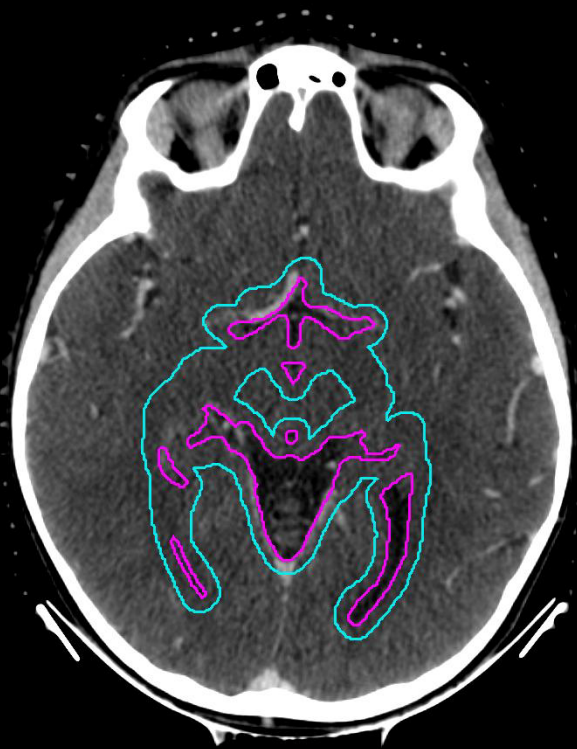


third ventricle, region of pineal cistern
occipital horns of lateral ventricles

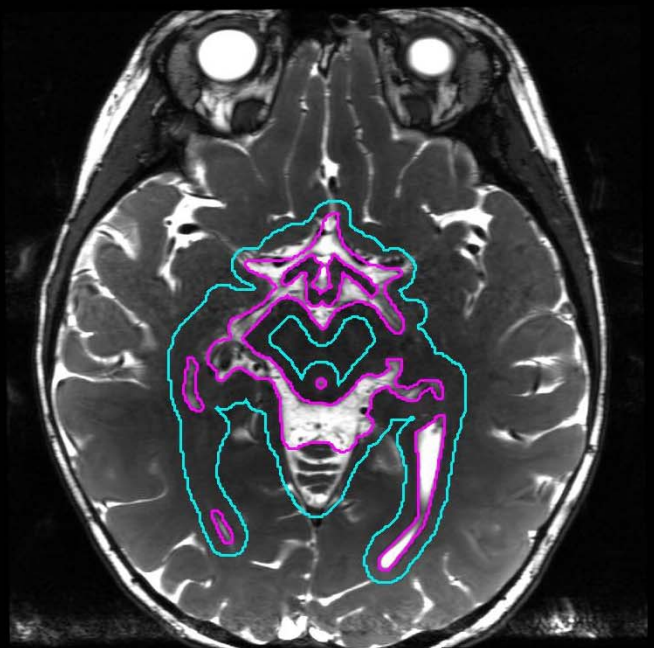
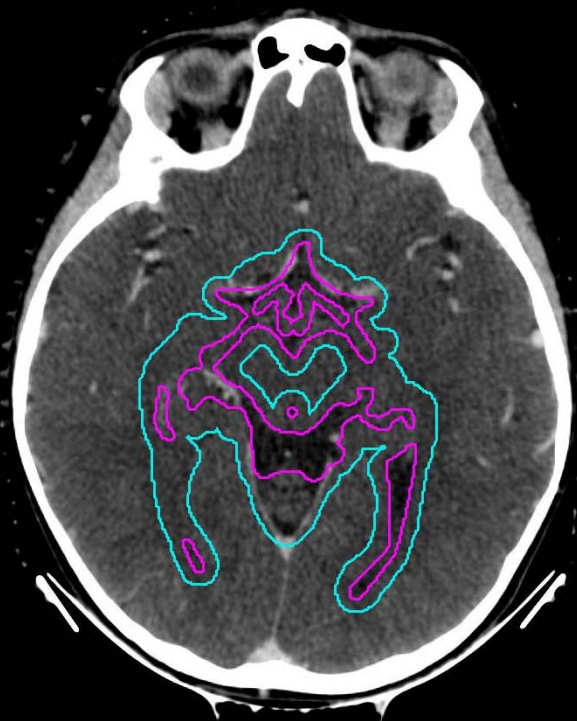
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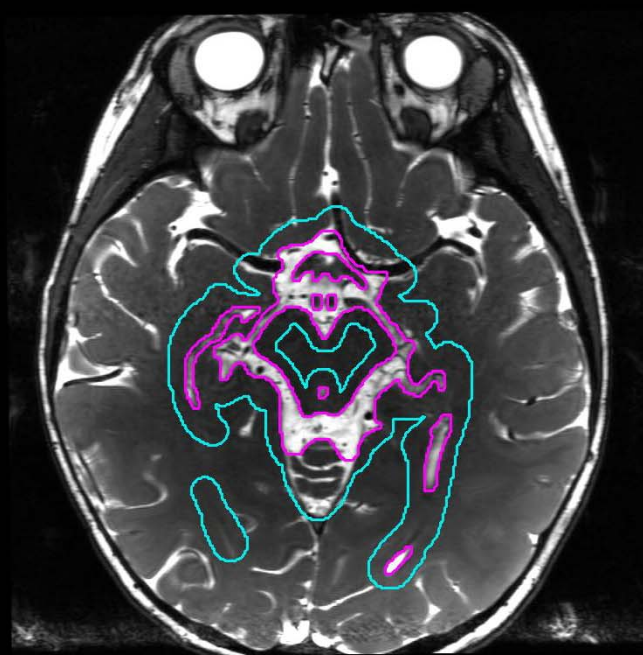
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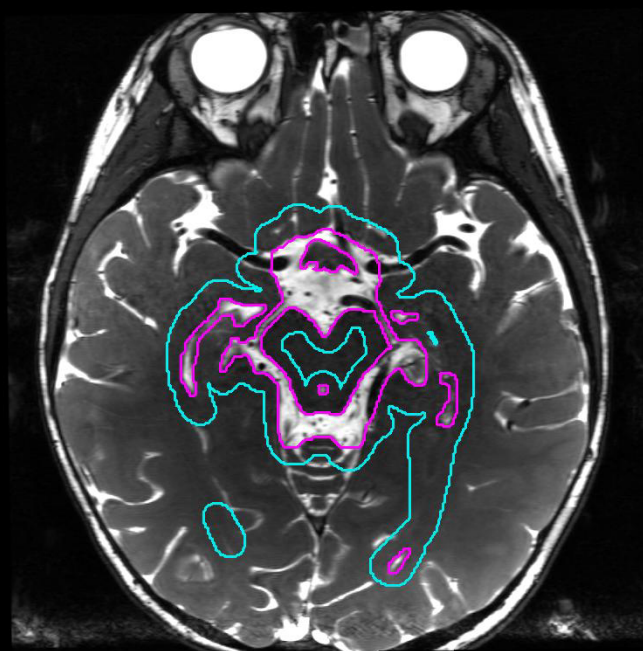
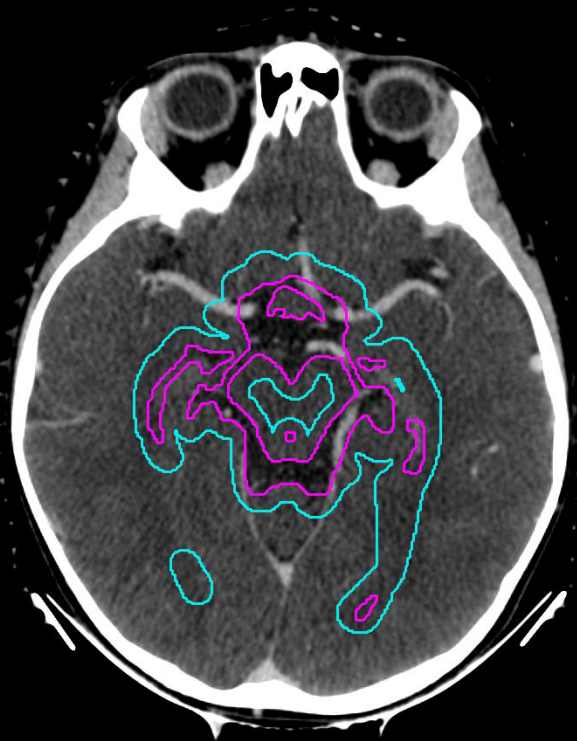
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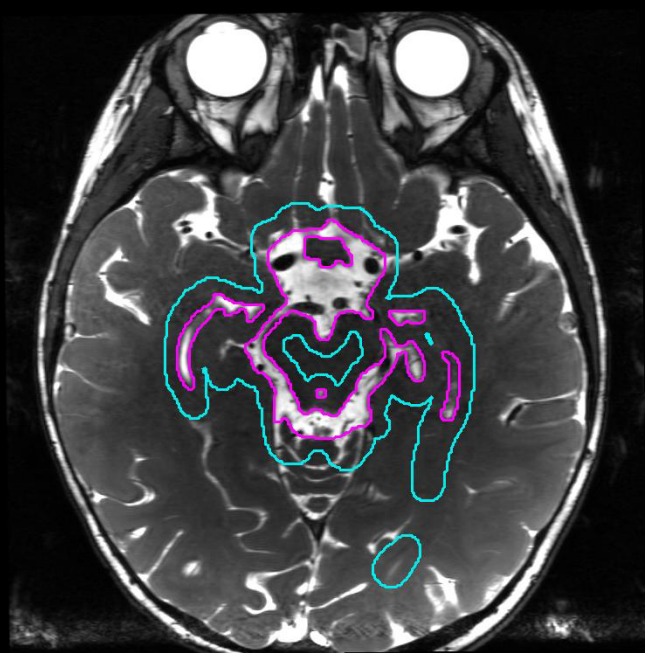
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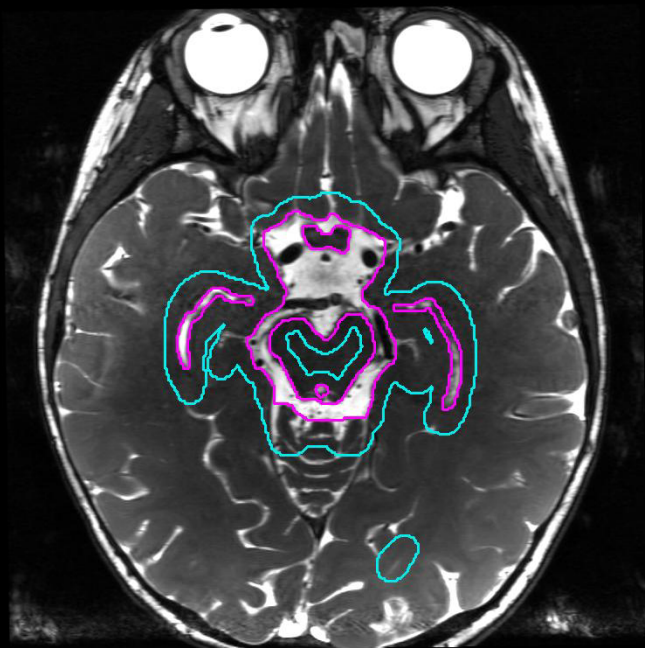
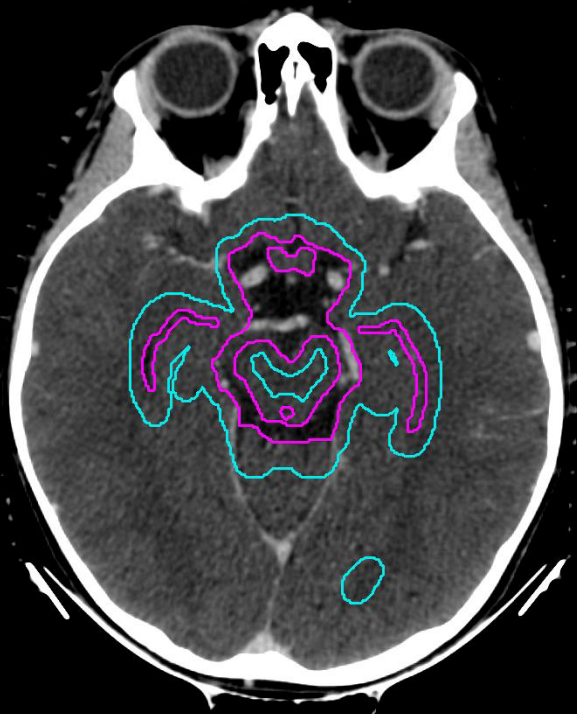
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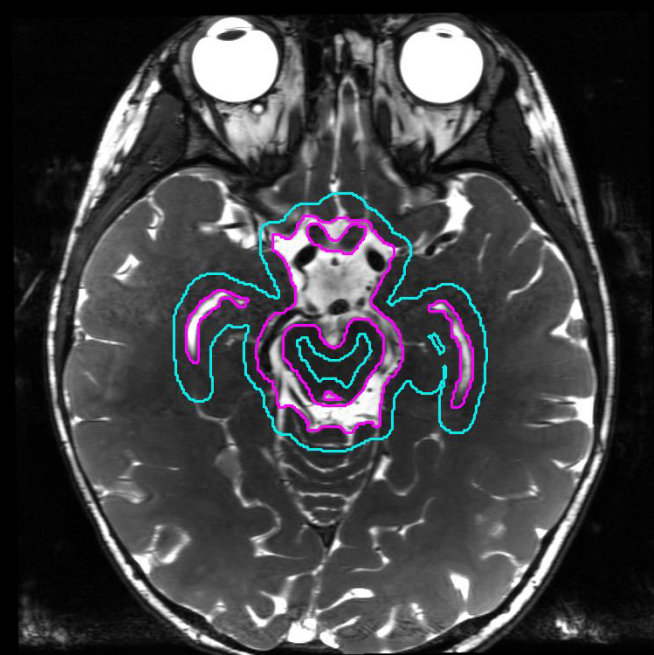
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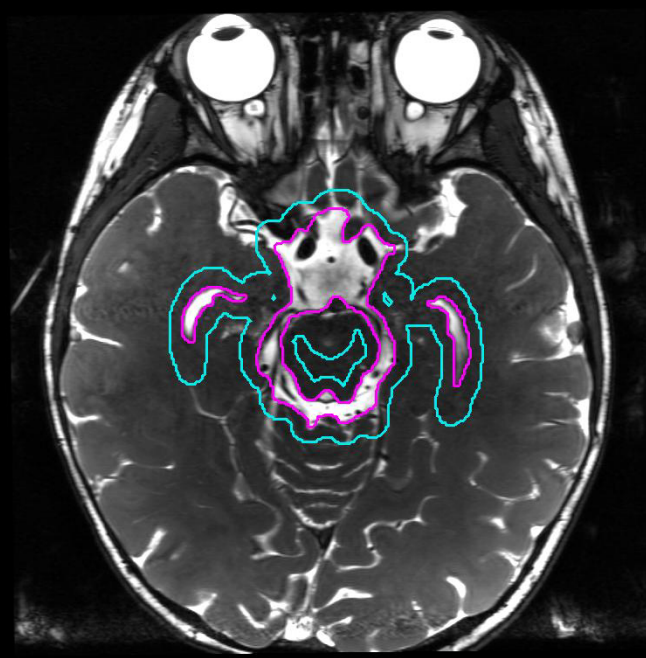
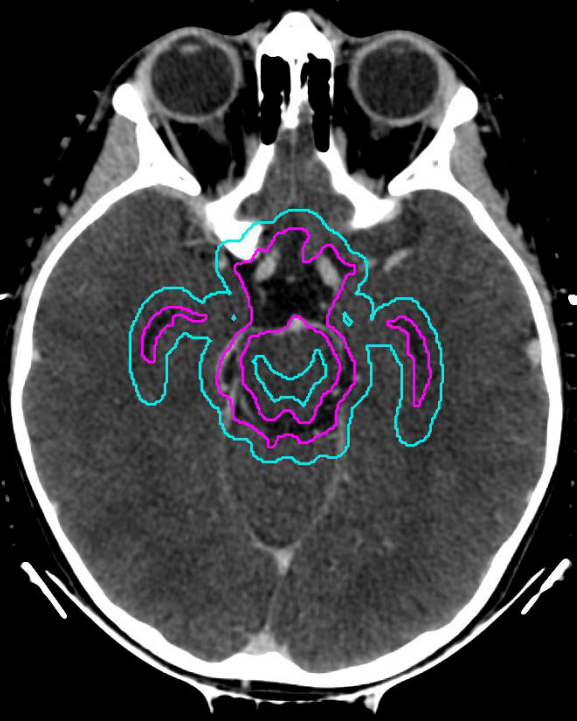


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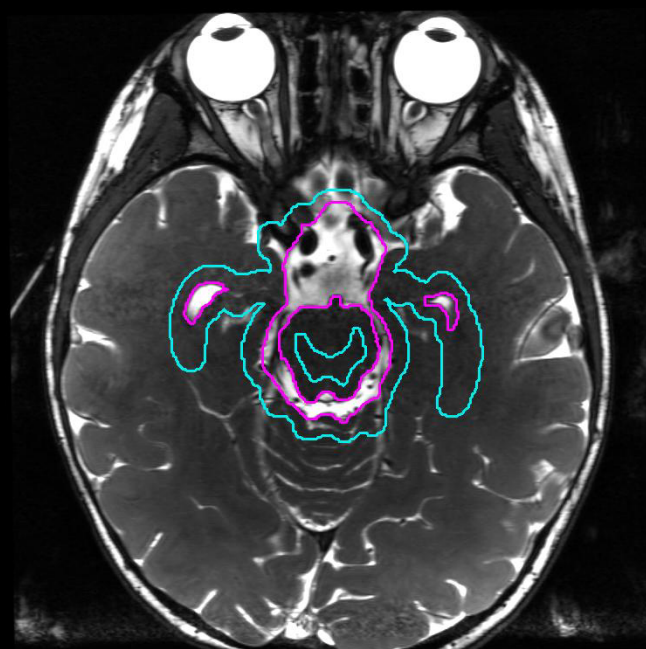


region of suprasellar cistern
temporal horns of lateral ventricles

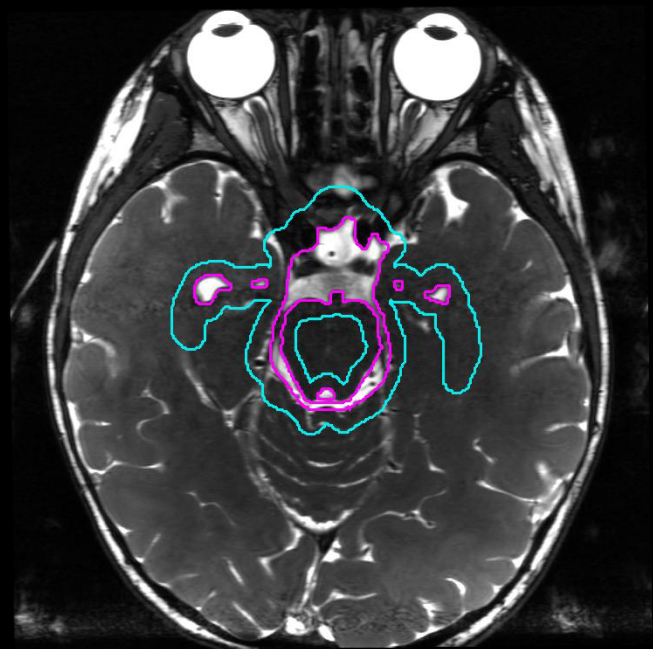
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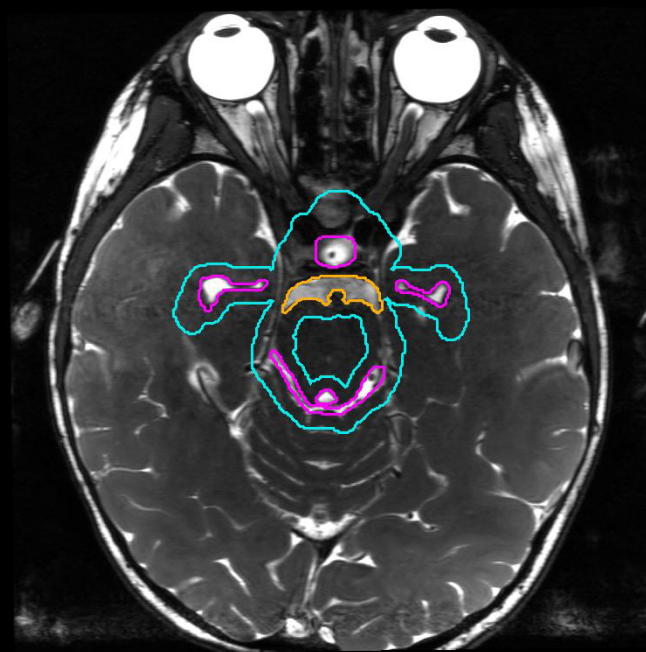
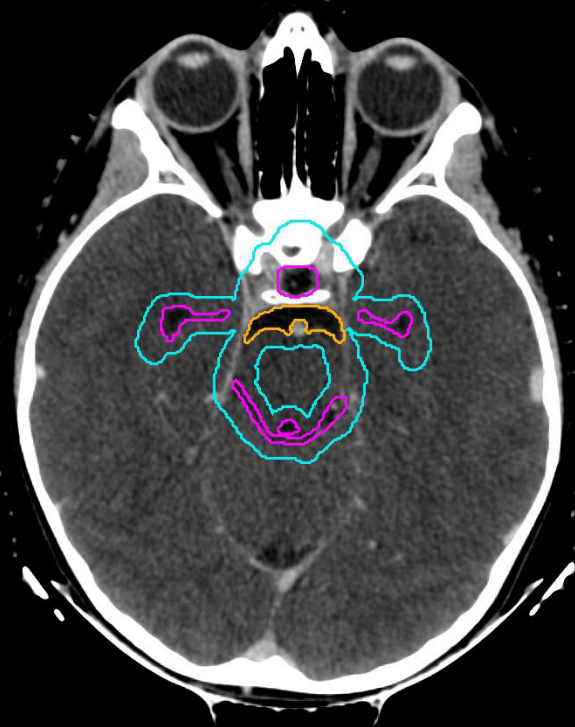
■ WVVCTV
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WVCTV

prepontine cistern

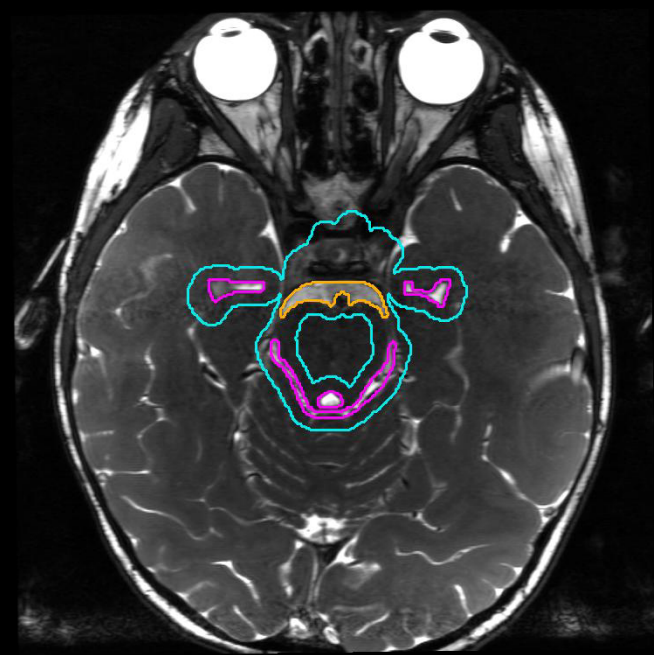
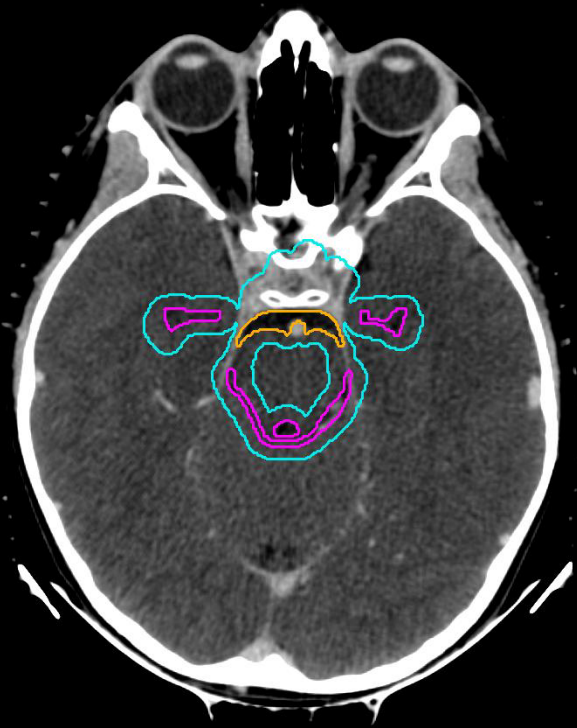
WVPTV



WVCTV

prepontine cistern

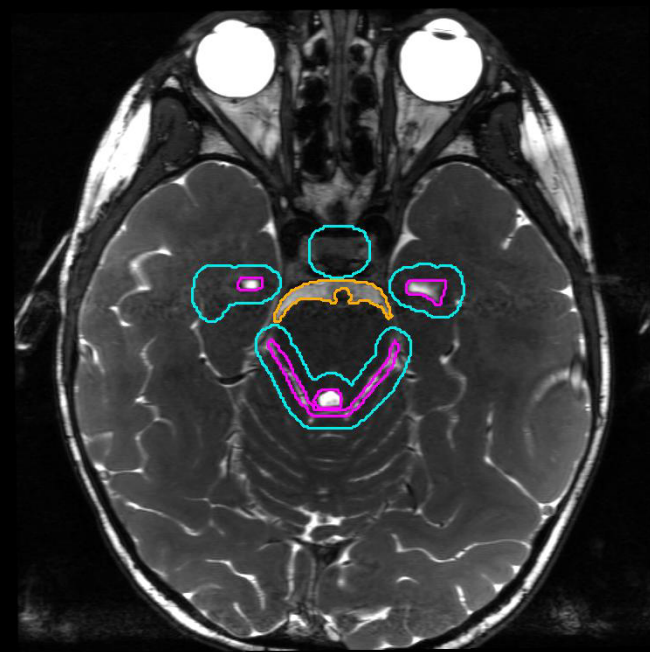
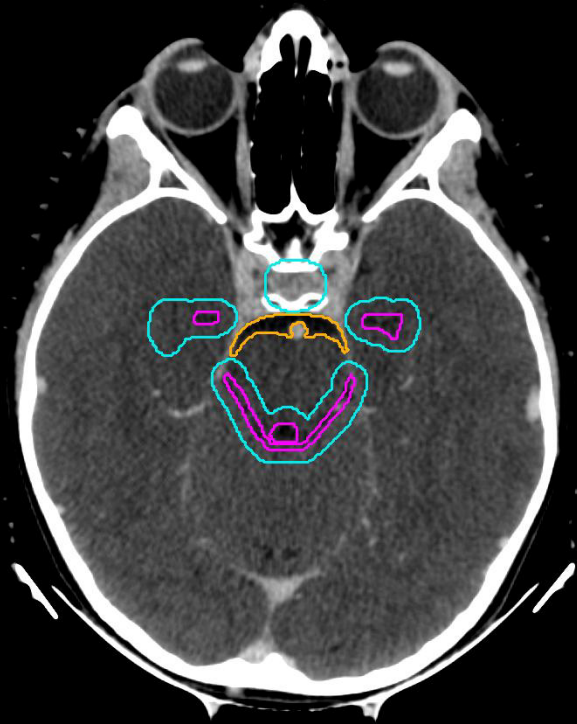
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WVCTV

prepontine cistern

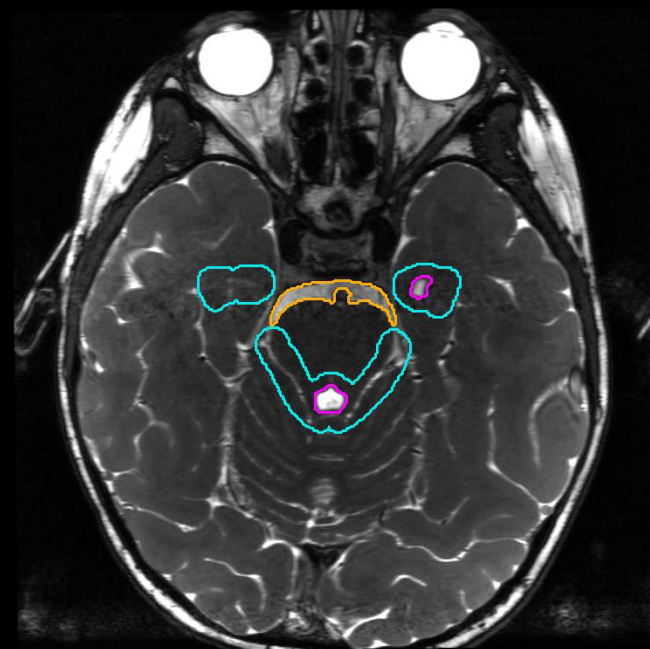
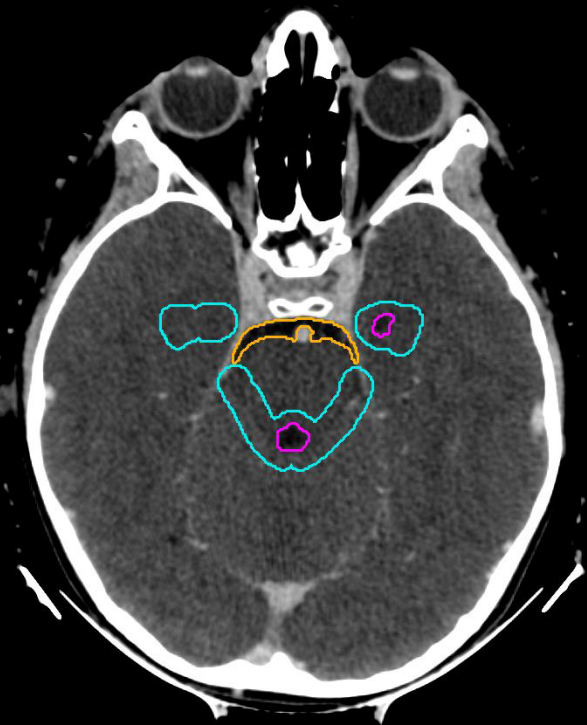
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WVCTV

prepontine cistern

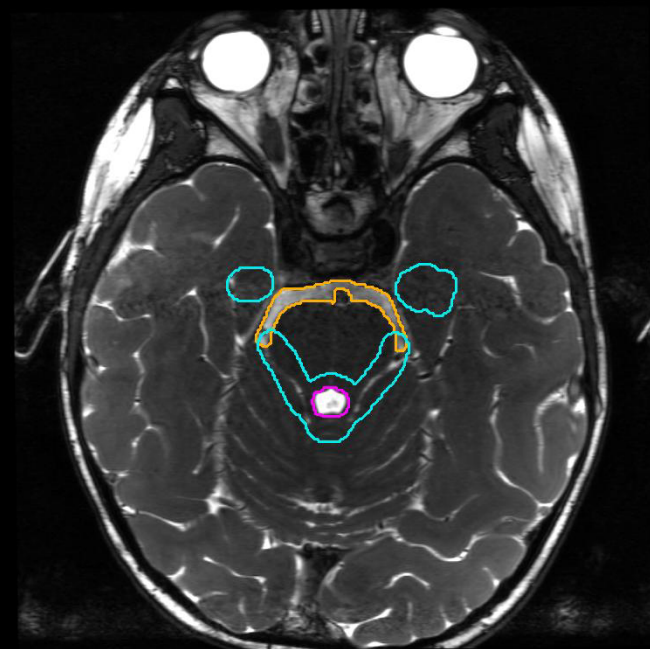
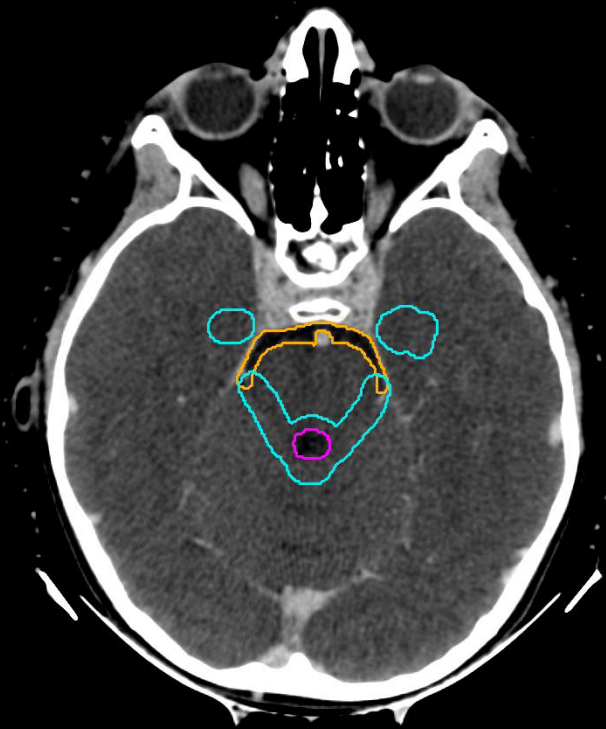
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WVCTV

prepontine cistern

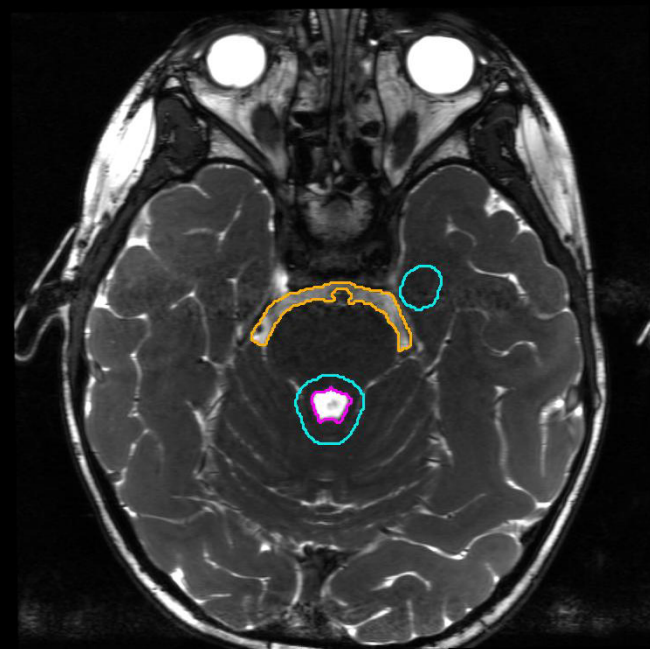
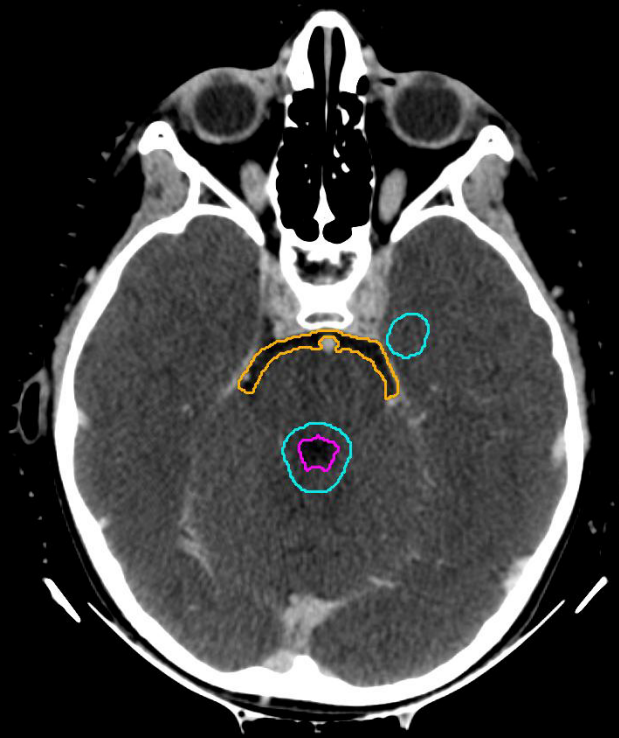
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prepontine cistern

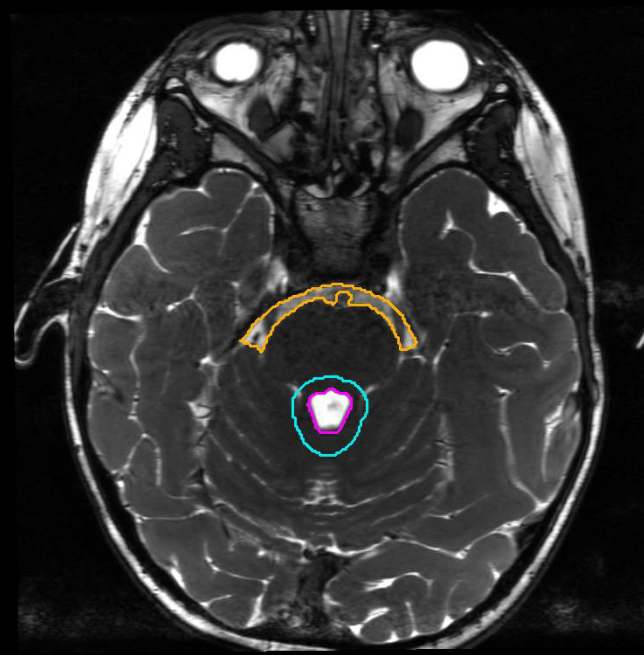
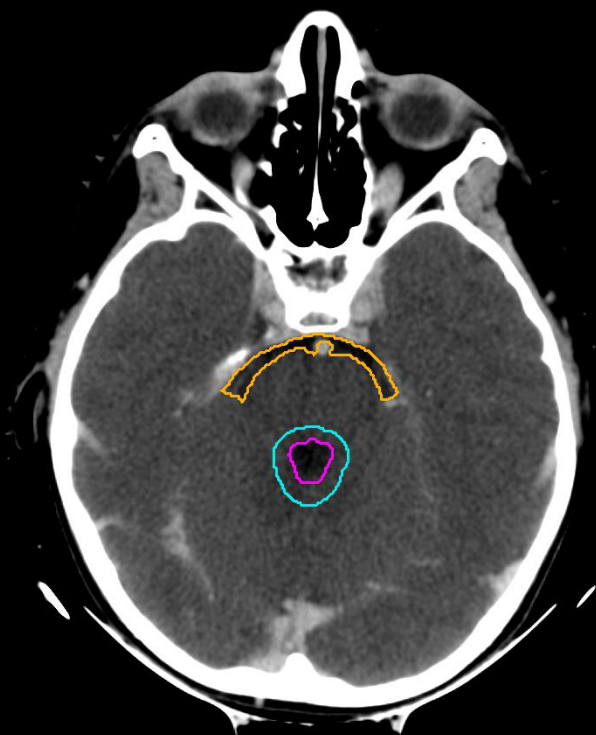
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WVCTV

prepontine cistern

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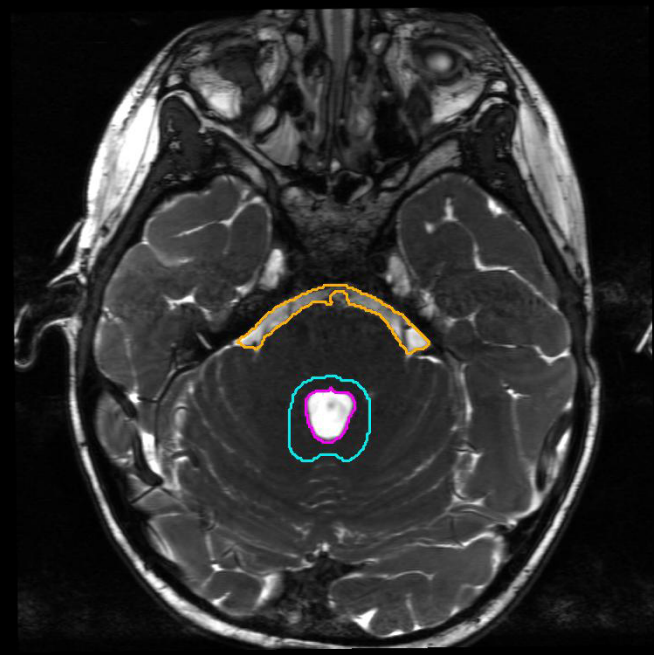
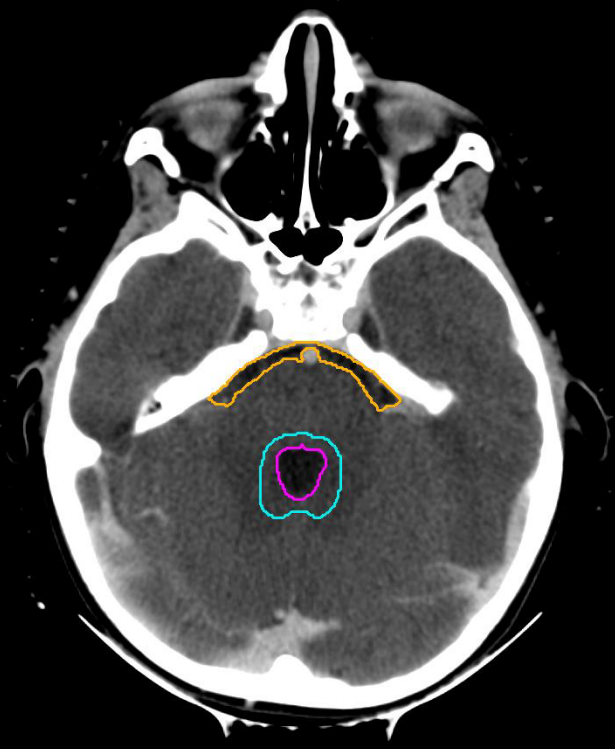


fourth ventricle, prepontine cistern

WVCTV

prepontine cistern

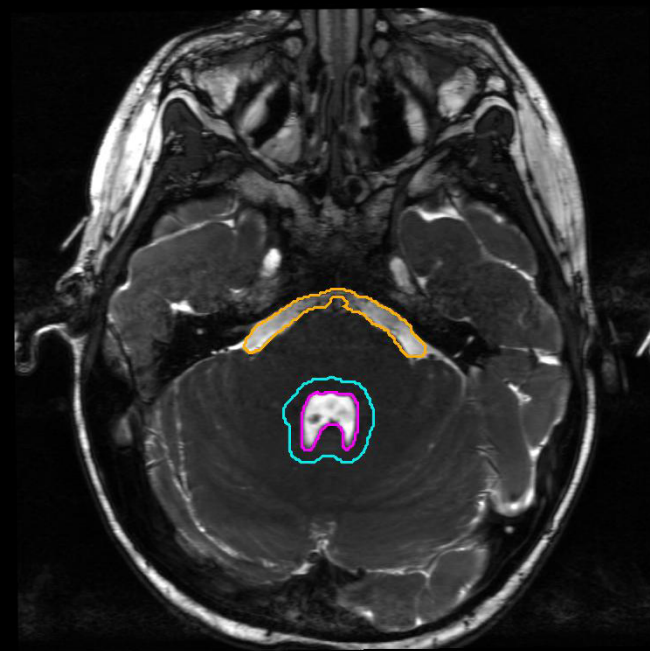
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prepontine cistern

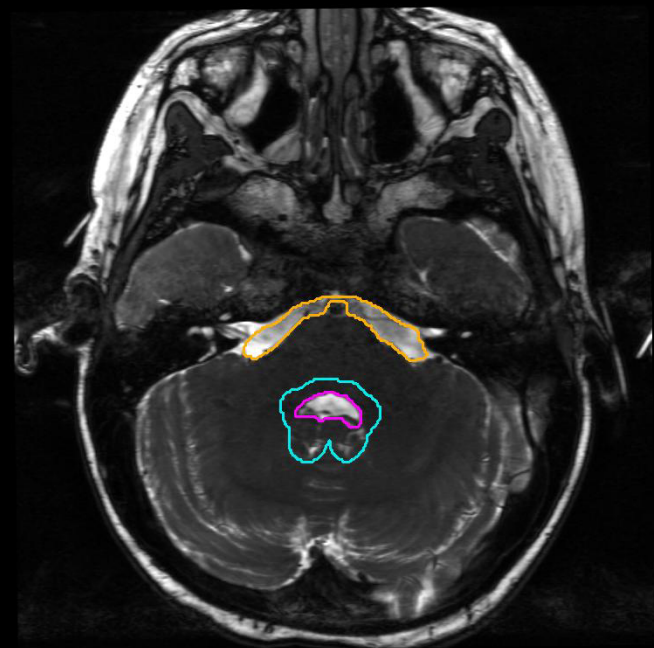
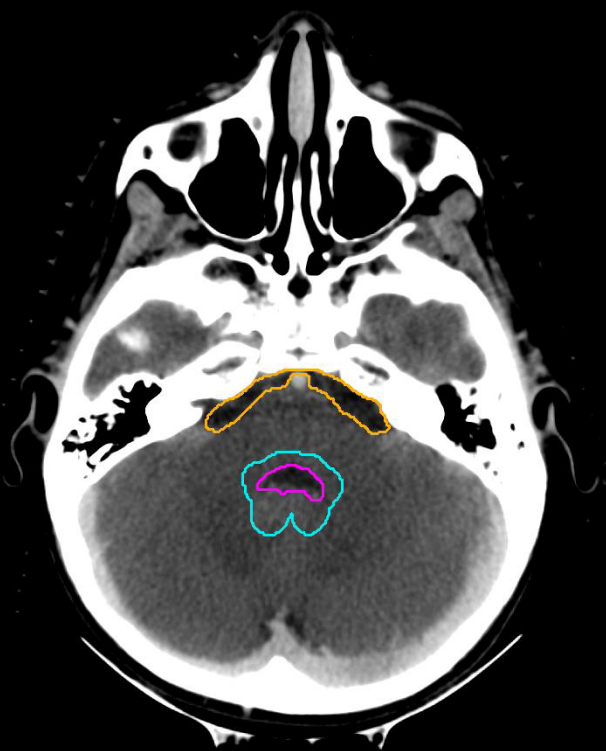
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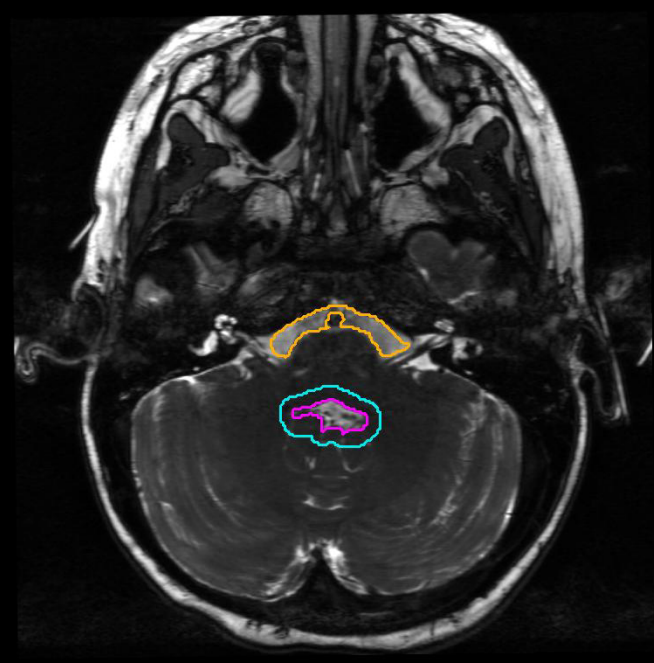
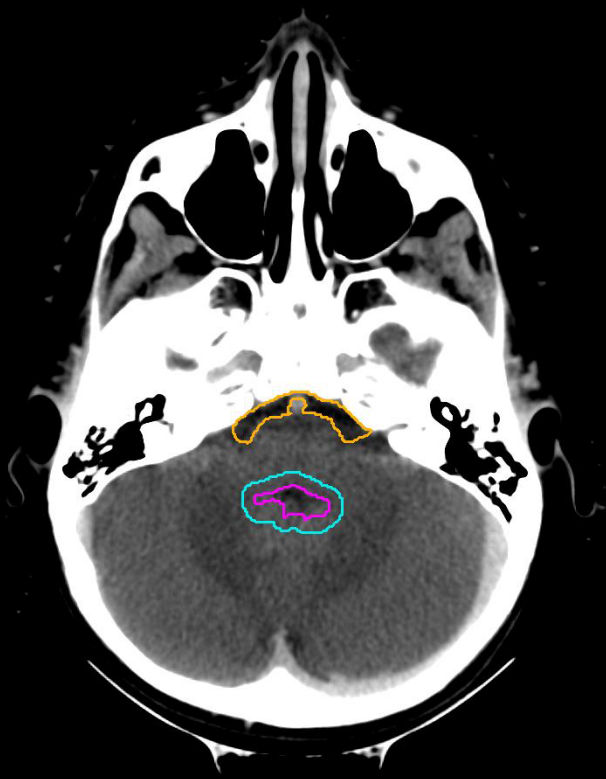
prepontine cistern

WVPTV



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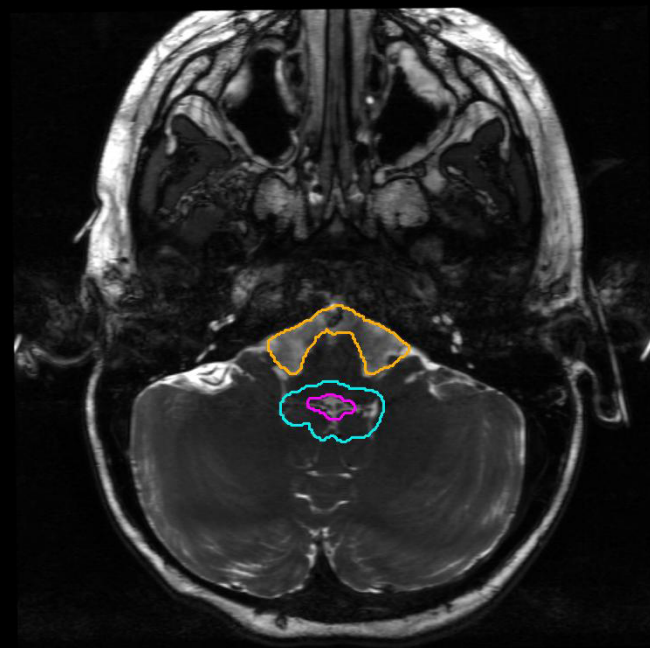
prepontine cistern



WVCTV

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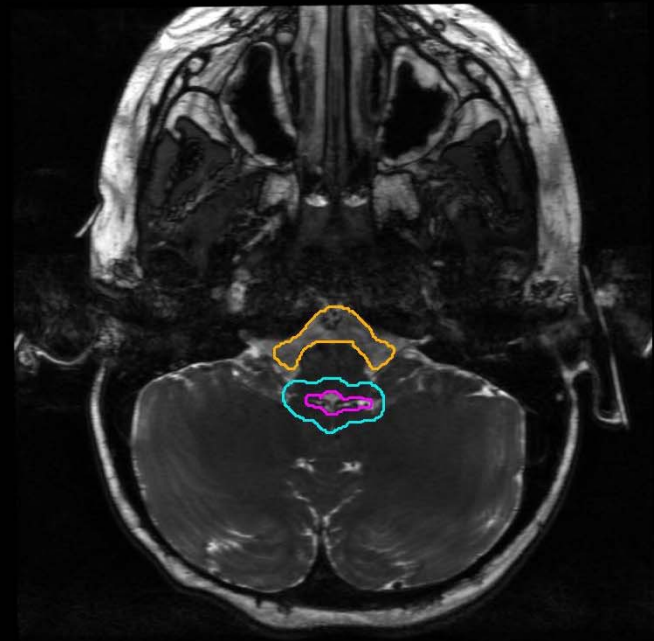
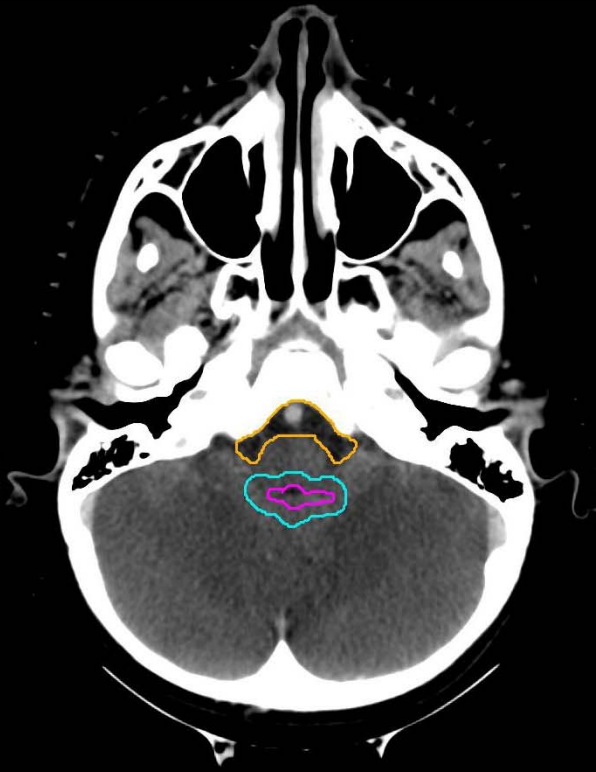
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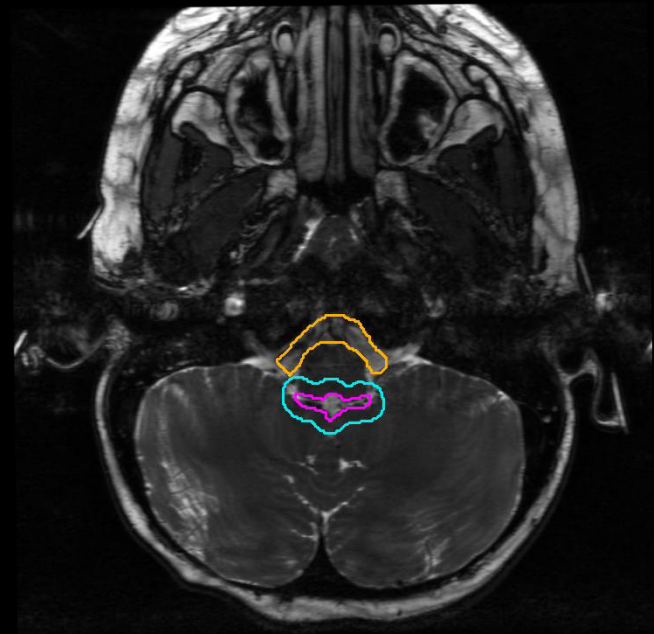
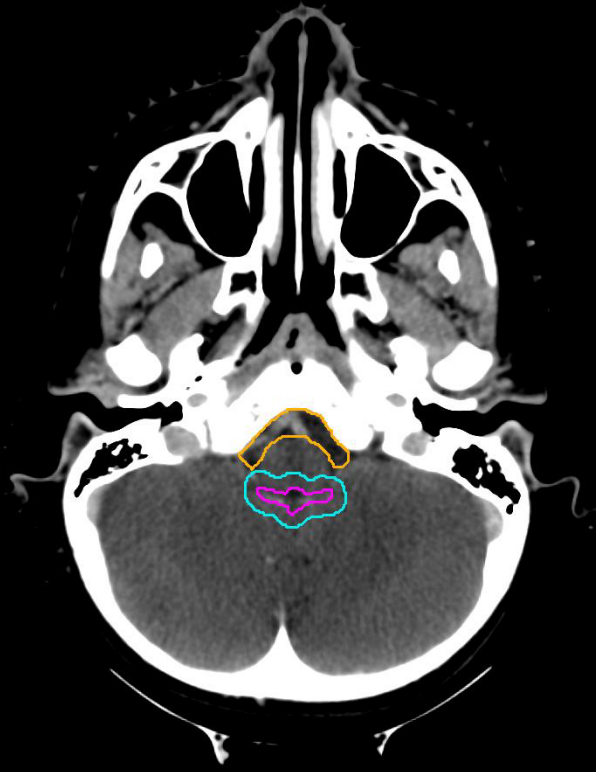
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prepontine cistern

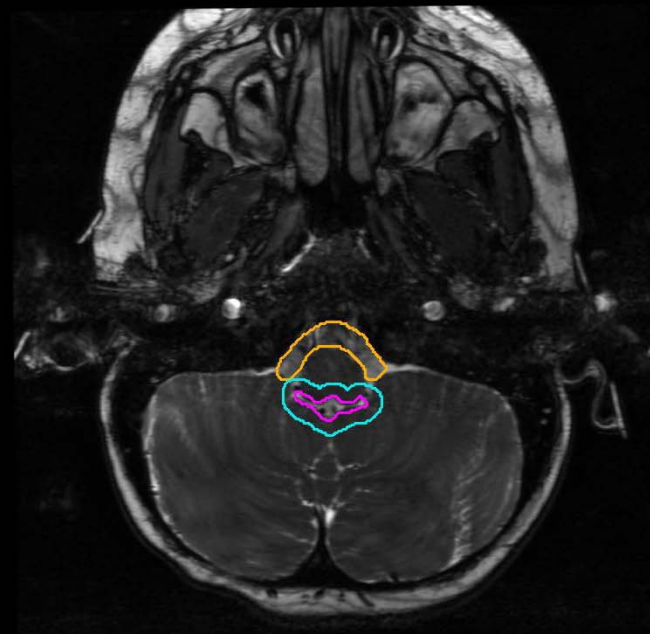
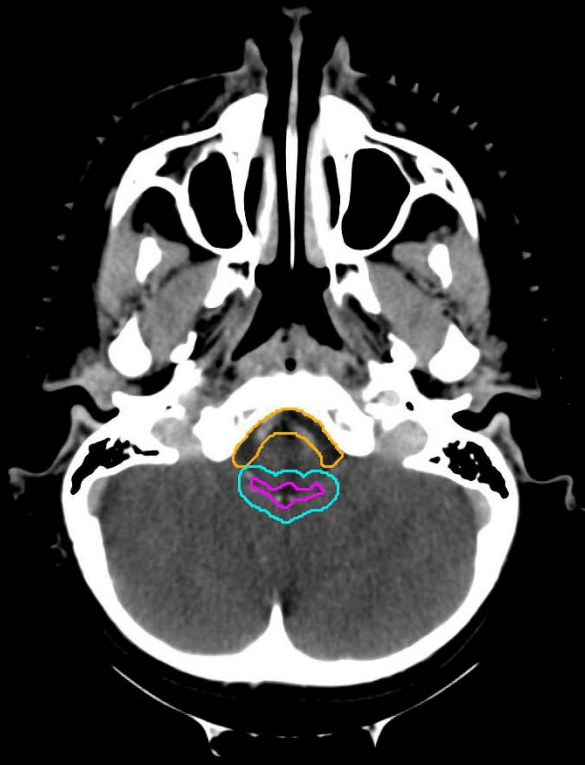
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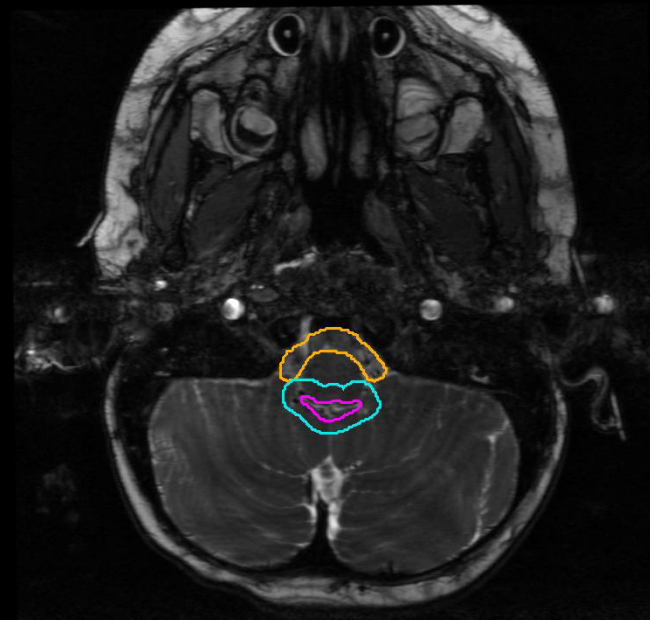
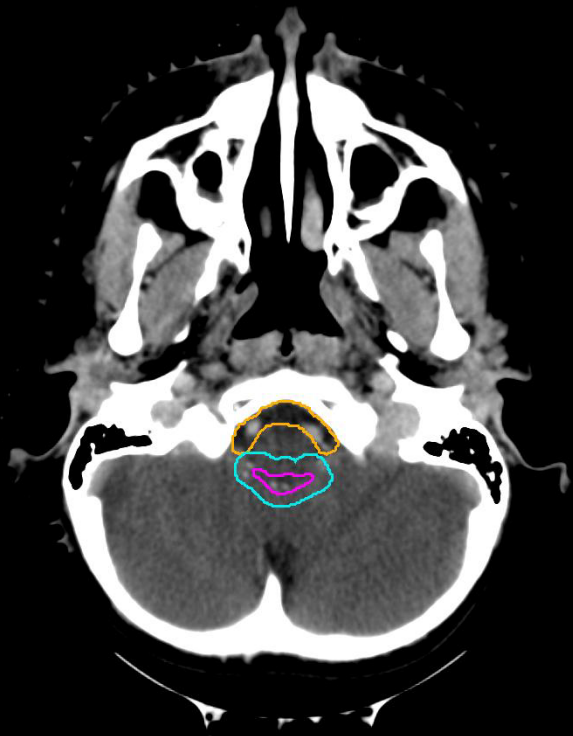
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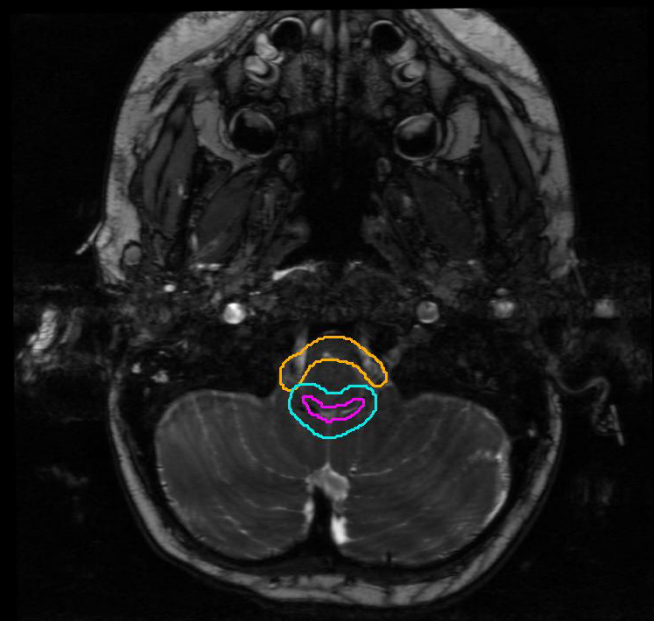
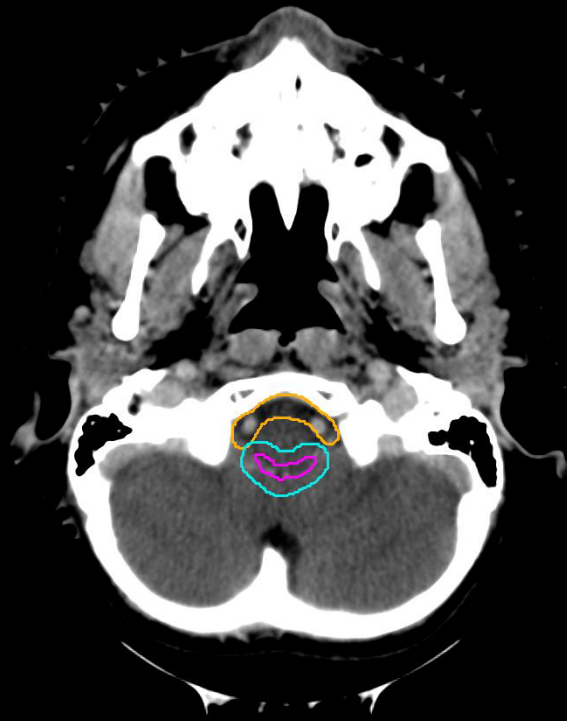
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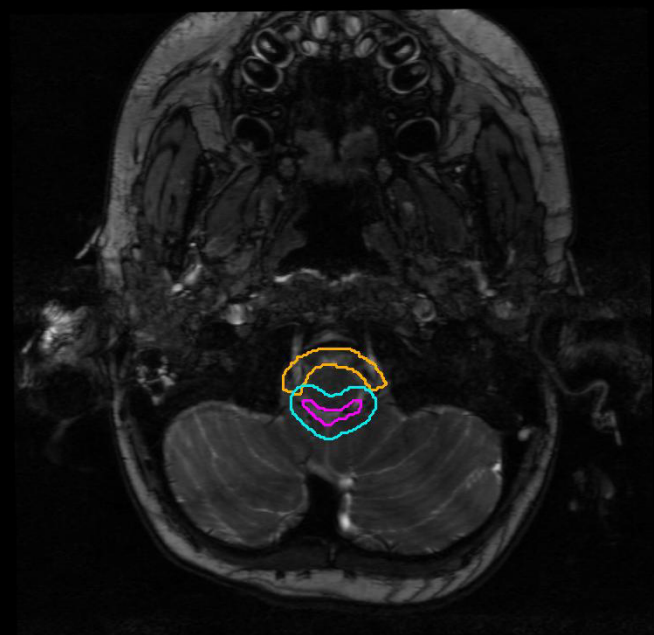
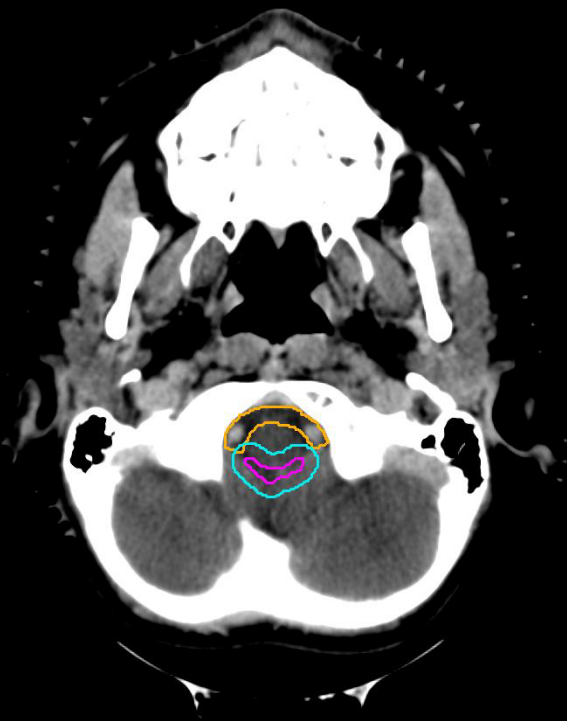
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WVCTV

prepontine cistern

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WVCTV

prepontine cistern

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