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 ventriclular 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 Ventrictles

• 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 4\textsuperscript{th} 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 3rd 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
lateral ventricles
third ventricle, region of pineal cistern
third ventricle, region of pineal cistern occipital horns of lateral ventricles
region of suprasellar cistern
temporal horns of lateral ventricles
fourth ventricle, prepontine cistern
WVVCTV

prepontine cistern

WVVPTV