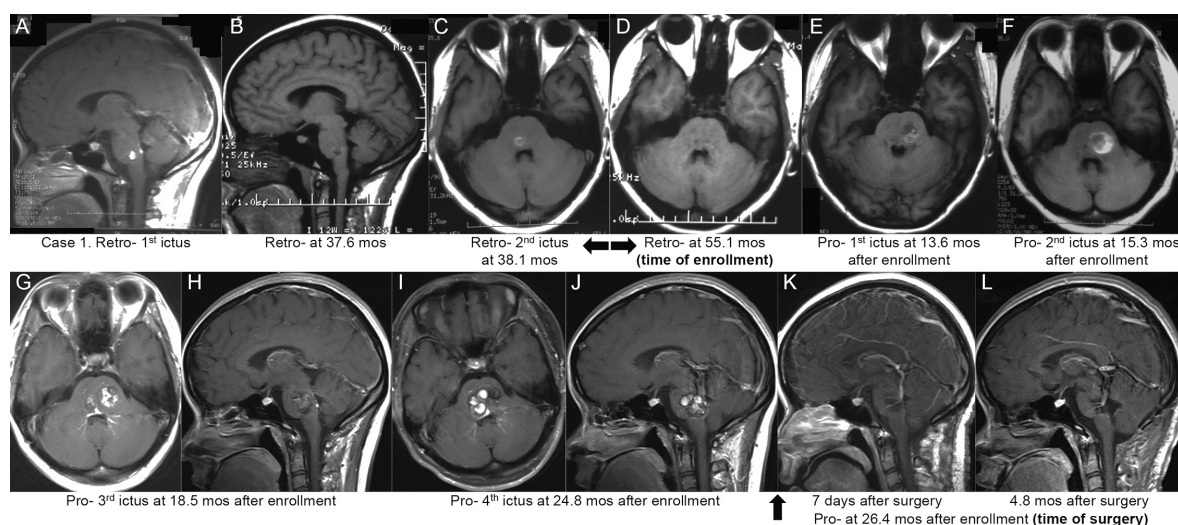


## SUPPLEMENTAL MATERIAL

## Supplementary Figure 1

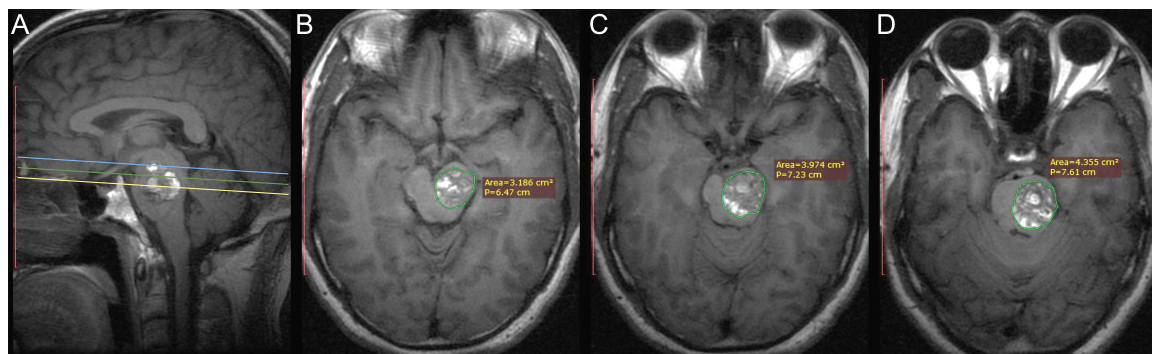


Supplementary Figure 1. Case illustration. **A-L. Case 1.** A 13-year-old girl presented with right CN VI deficit and diplopia at the first hemorrhage (**A**), and contrast T1-weighted sagittal MRI scans showed a CM involving the pons with an associated DVA. MRI re-examination at 37.6 months (**B**) showed that the hematoma had resolved, but a second hemorrhage occurred at 38.1 months, as shown in the T1-weighted axial MRI scans (**C**). At 55.1 months, she was referred to our institute with a mRS score of 3, and at enrollment, the MRI scans (**D**) showed a shrunken lesion. Unfortunately, she suffered 4 prospective hemorrhages 13.6 (**E**), 15.3 (**F**), 18.5 (**G-H**), and 24.8 (**I-J**) months after enrollment with stepwise neurological deterioration at each ictus, and her serial MRI scans showed increased lesion size and hematoma. At 26.4 months after enrollment, she received surgical resection with an mRS score of 4 at the censoring time. MRI scans at 7 days (**K**) and 4.8 months (**L**) after surgery showed total resection.

**The left black arrow** indicates the retrospective radiographic data. **The right black arrow** indicates the prospective radiological data since inception. **The upper black arrow** indicates a censoring event (surgery). DVA, developmental venous anomaly; mRS, modified Rankin Scale.

## SUPPLEMENTAL MATERIAL

## Supplementary Figure 2



Supplementary Figure 2. T1-weighted sagittal MRI scan (**A**) showed 3 cross-reference lines that were corresponding to panel B (blue line), C (green line), and D (yellow line), respectively. The T1-weighted axial MRI scans (**D**) showed the maximal axial cross-sectional area of the lesion, but other panels (**B-C**) were smaller. The lesion encompassed 2 anatomical compartments including midbrain (**B**) and pons (**C-D**), and we classified it as a pons CM according to the location of the maximal axial cross-sectional area.