Case of the Week

July 9, 2012
History

• **History:** 4 year old boy with a cerebellar mass.

• **Specimen Received:** Cerebrospinal fluid
Diagnosis - Medulloblastoma

- The CSF specimen is cellular and is notable for small, round neoplastic cells with high nuclear-to-cytoplasmic ratios, present singly and in clusters.

- The Diff-Quik preparation especially highlights nuclear molding and irregularities in the nuclear contours.

- Cohesive clusters composed of small round blue cells are appreciated in the ThinPrep slide. The chromatin is granular and nucleoli are not seen.
Diagnosis - Medulloblastoma

• The differential diagnosis includes small round blue cell tumors that can arise in a variety of locations in the central nervous system such as:
  – Pineal gland (pineoblastoma)
  – Cerebellum (medulloblastoma)
  – Retina (retinoblastoma)

• In this specific clinical scenario, the most likely diagnosis is medulloblastoma. In fact, a biopsy was performed on the brain tumor which was also diagnosed as a medulloblastoma.