

# IAP XXVI International Congress Slide Seminar 07 (SS07)

## Pitfalls in Surgical Neuropathology Case 6

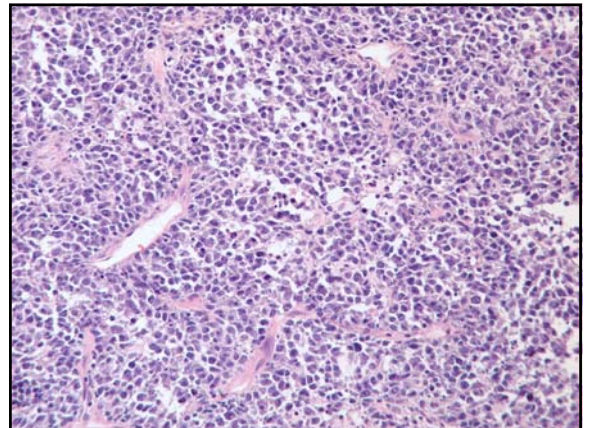
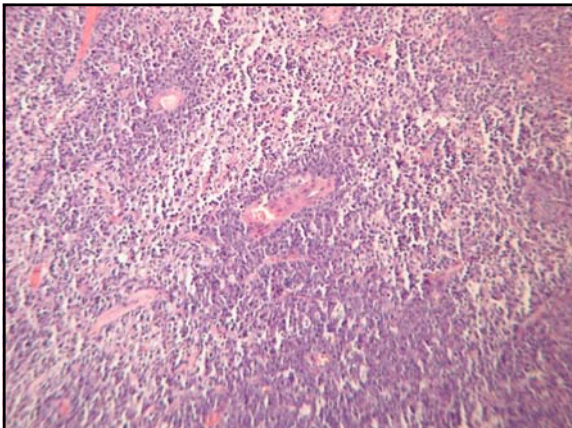
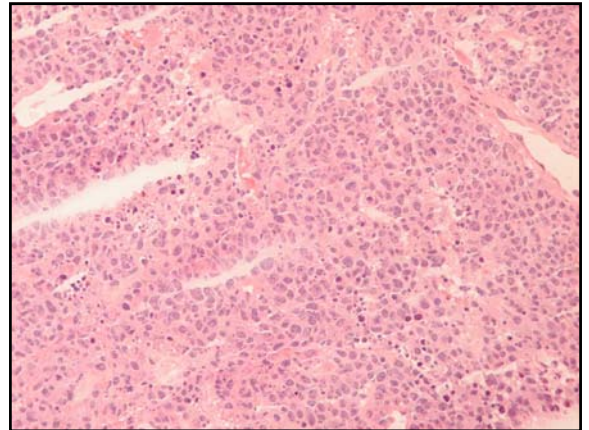
Richard A. Prayson, M.D.  
Cleveland Clinic Foundation

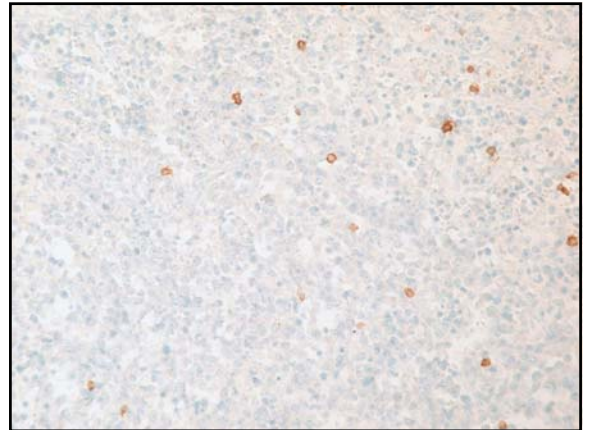
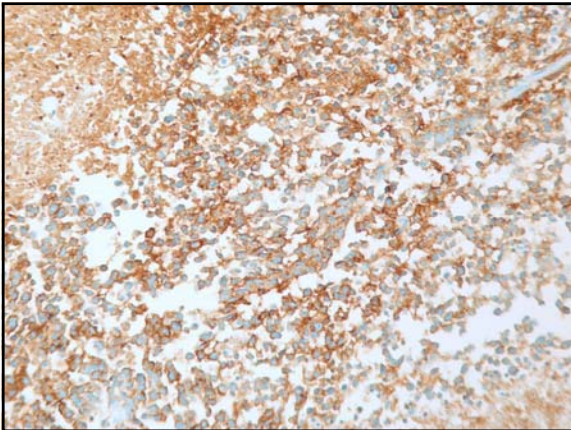
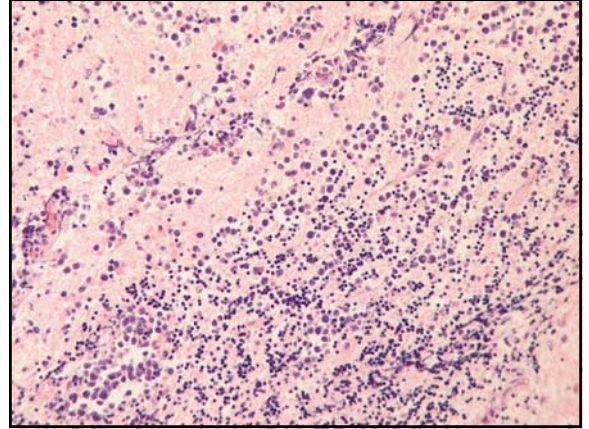
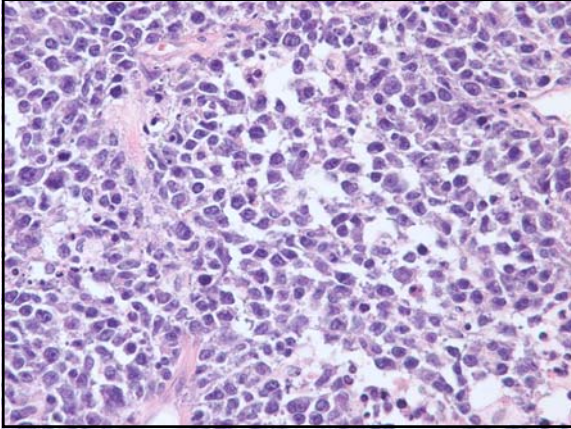
## Clinical History

- 64M
- S/P resection of pituitary adenoma (28 yrs prior), radiation therapy, panhypopituitarism
- 4 mos prior to surgery: left-sided hearing loss with tinnitus, diplopia, left lid ptosis, imbalance difficulties

## Clinical History

- MRI: Stable pituitary lesion; 2.5 x 2.0 x 2.0 cm. left cerebellar mass c/w meningioma
- Progressive symptoms
- MRI repeated: cerebellar mass 3.0 x 2.5 x 2.0 cm.
- CSF with reactive lymphocytosis
- Excision





## Diagnosis

Primary nonHodgkin's lymphoma of the CNS – diffuse large B cell type

## Primary CNS Lymphoma

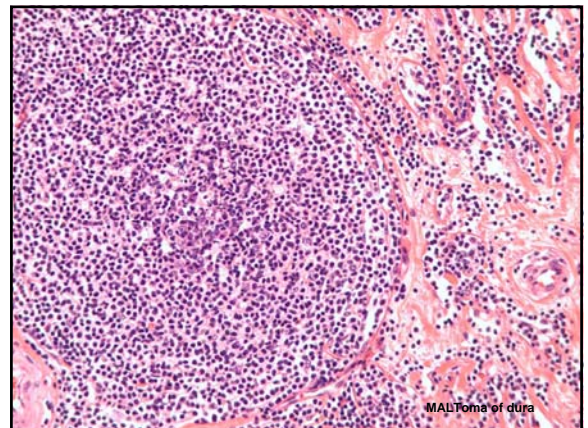
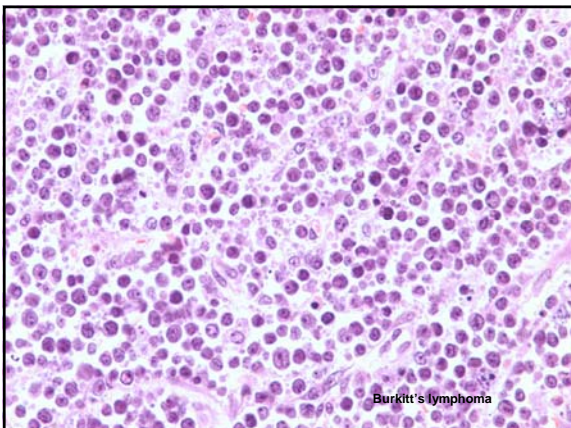
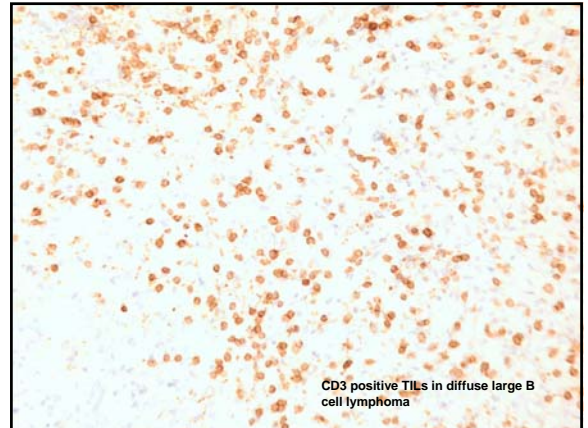
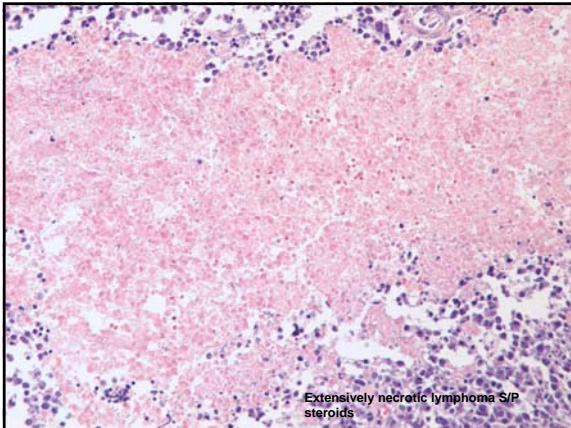
- Increasing incidence, 0.8-6.6%
- Association with AIDS, post-transplantation
- Age peak 6<sup>th</sup> – 7<sup>th</sup> decades, F>M
- 60% supratentorial, most parenchymal-based
- 25-50% multifocal (60-80% in AIDS)
- Focal neurologic deficits, increased ICP, neuropsych. symptoms

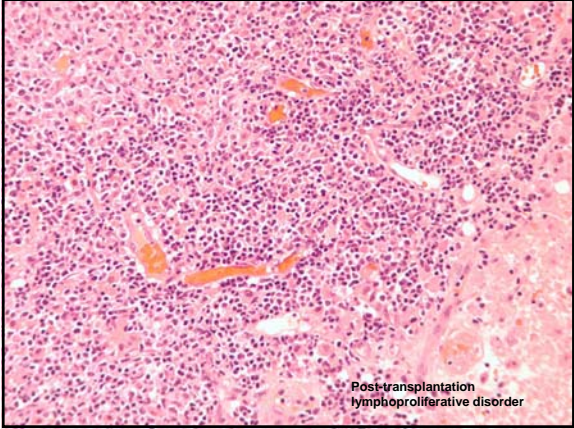
## Primary CNS Lymphoma

- Subependymal spread on imaging
- CSF cytology positive 5-30% (70-90% of metastatic lymphomas)
- 98% B cell lymphomas - most diffuse large cell type
- Diffusely infiltrative, angiocentric pattern

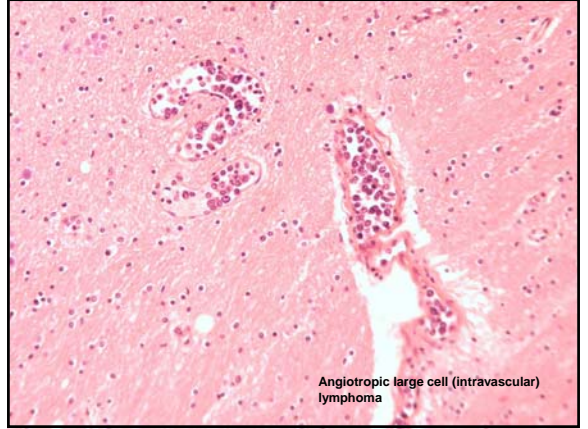
## Potential Diagnostic Issues

- Oops – treated with steroids before surgery
- TILs
- Other lymphoma types
- Solid pattern, small cell tumor pattern
- Angiocentric inflammation in non-neoplastic conditions





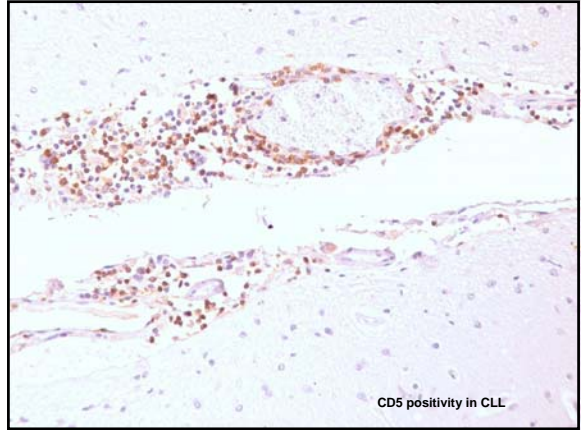
Post-transplantation lymphoproliferative disorder



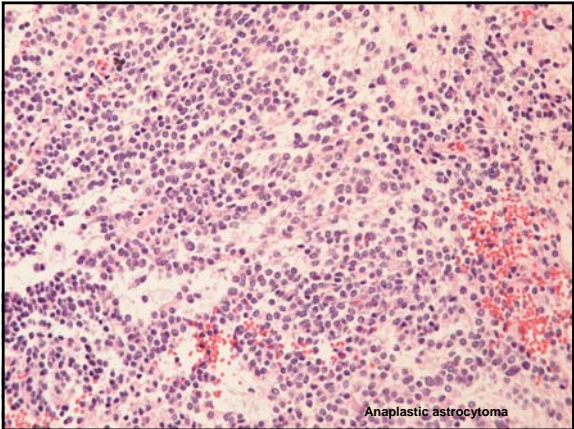
Angiotropic large cell (intravascular) lymphoma



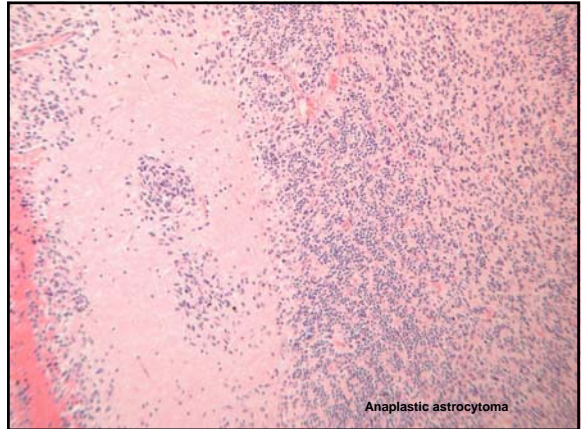
CLL involving meninges



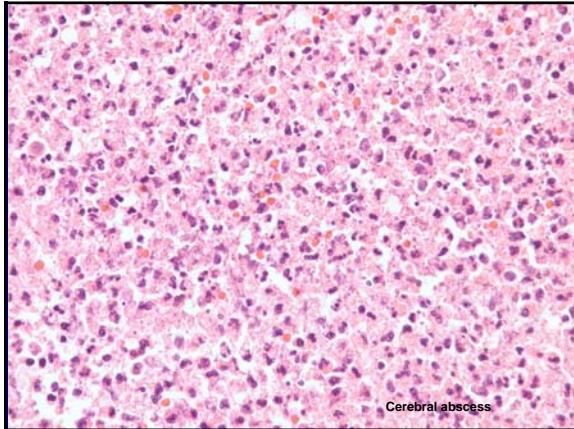
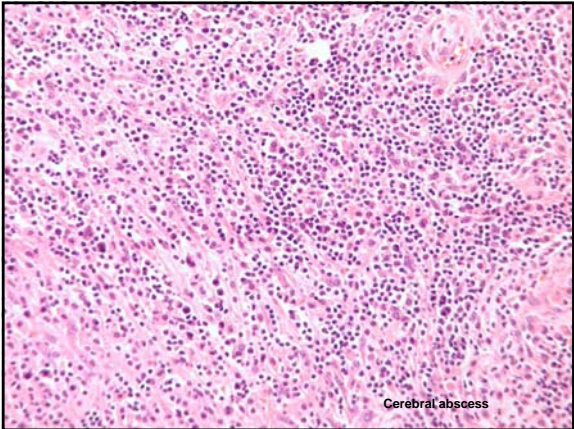
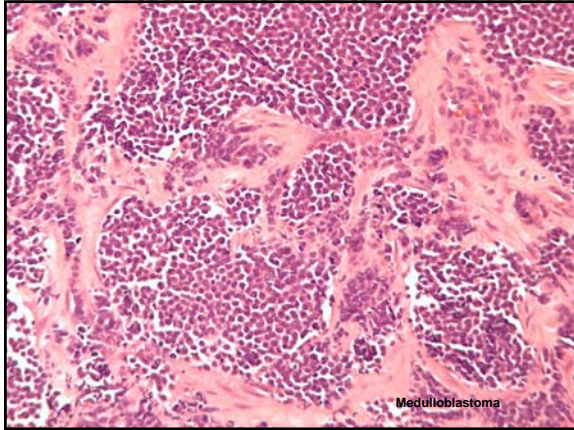
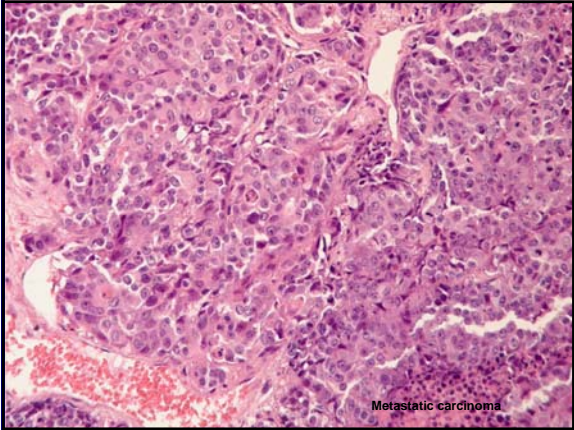
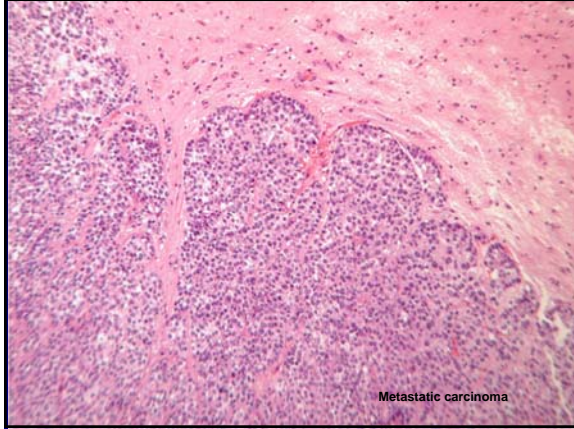
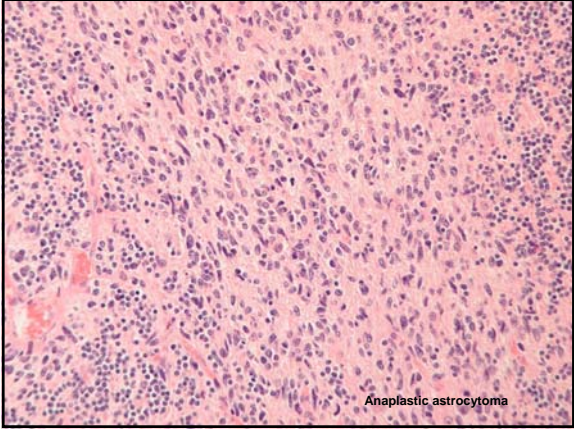
CD5 positivity in CLL

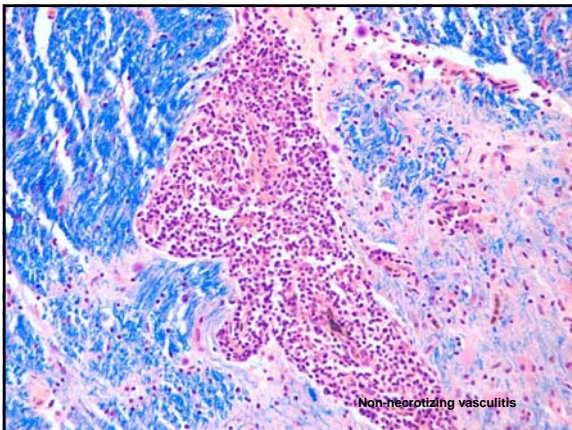
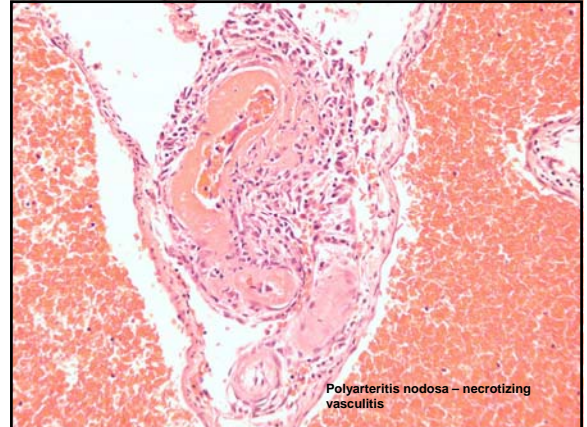
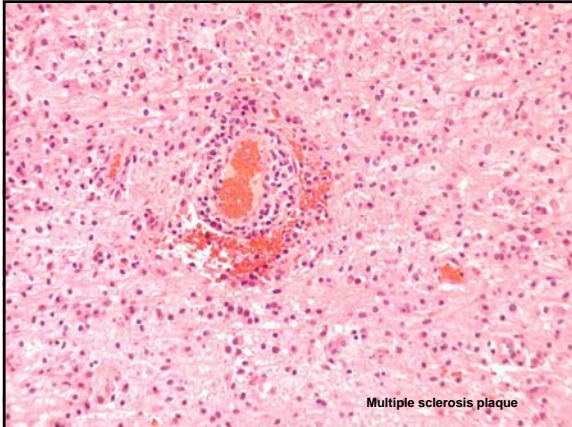


Anaplastic astrocytoma



Anaplastic astrocytoma





### Selected References

- Paulus W, Jellinger K, Morgello S, et al. Malignant lymphomas. In: Tumours of the Nervous System (Kleihues P and Cavenee WK editors). IARC Press, Lyon, France 2000.
- Tomlinson FH, Kurtin PJ, Suman VJ, et al. Primary intracerebral malignant lymphoma: a clinicopathologic study of 89 patients. *J Neurosurg* 82:558-566, 1995.
- Schlegel U, Schmidt-Wolf IGH, Deckert M. Primary CNS lymphoma: clinical presentation, pathological classification, molecular pathogenesis and treatment. *J Neurol Sci* 181:1-12, 2000.

### SELECTED REFERENCES

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- Macon WR, Williams ME, Greer JP, et al. T-cell-rich B-cell lymphomas. A clinicopathologic study of 19 cases. *Am J Surg Pathol* 16(4):351-363, 1992.