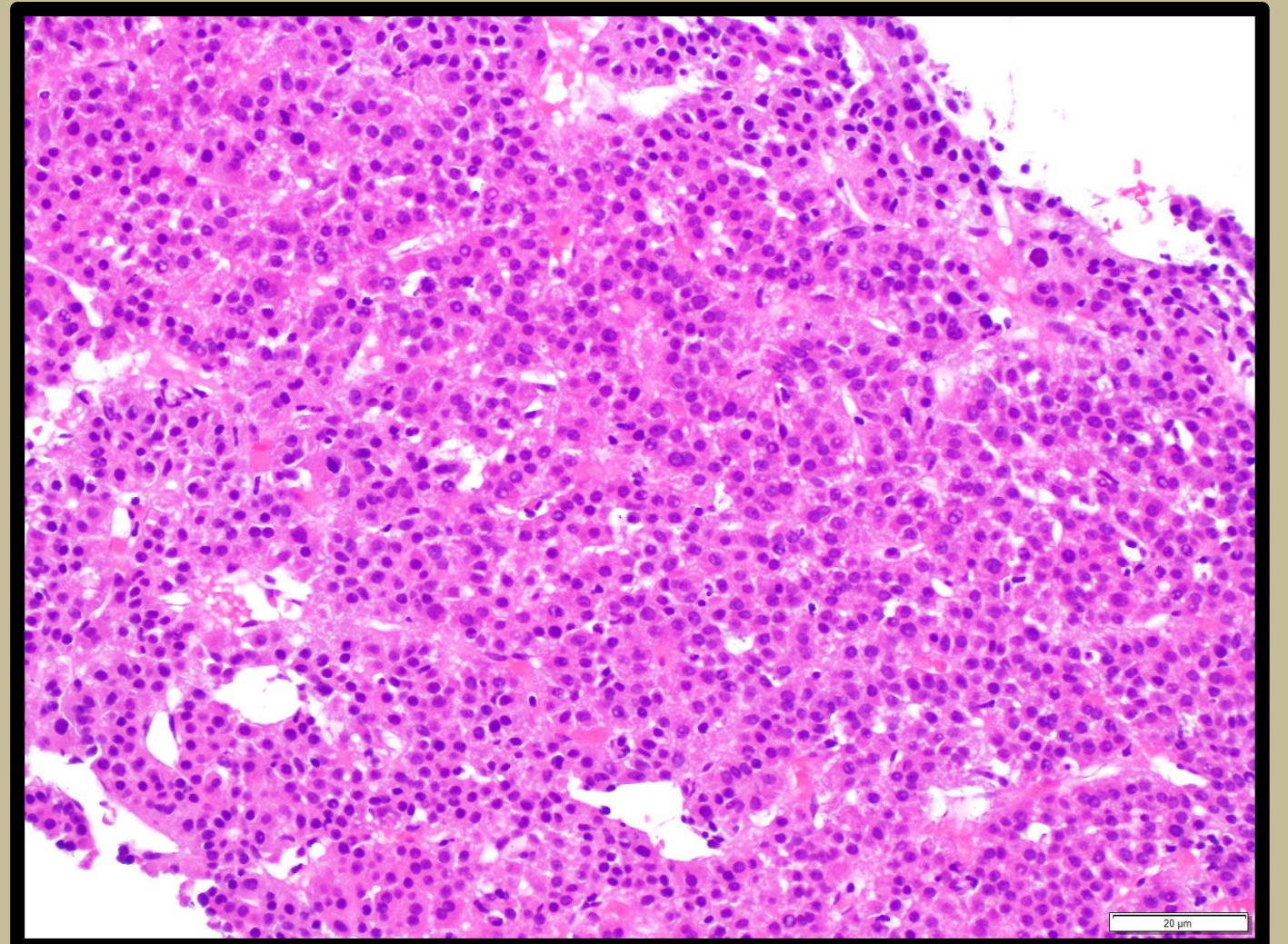
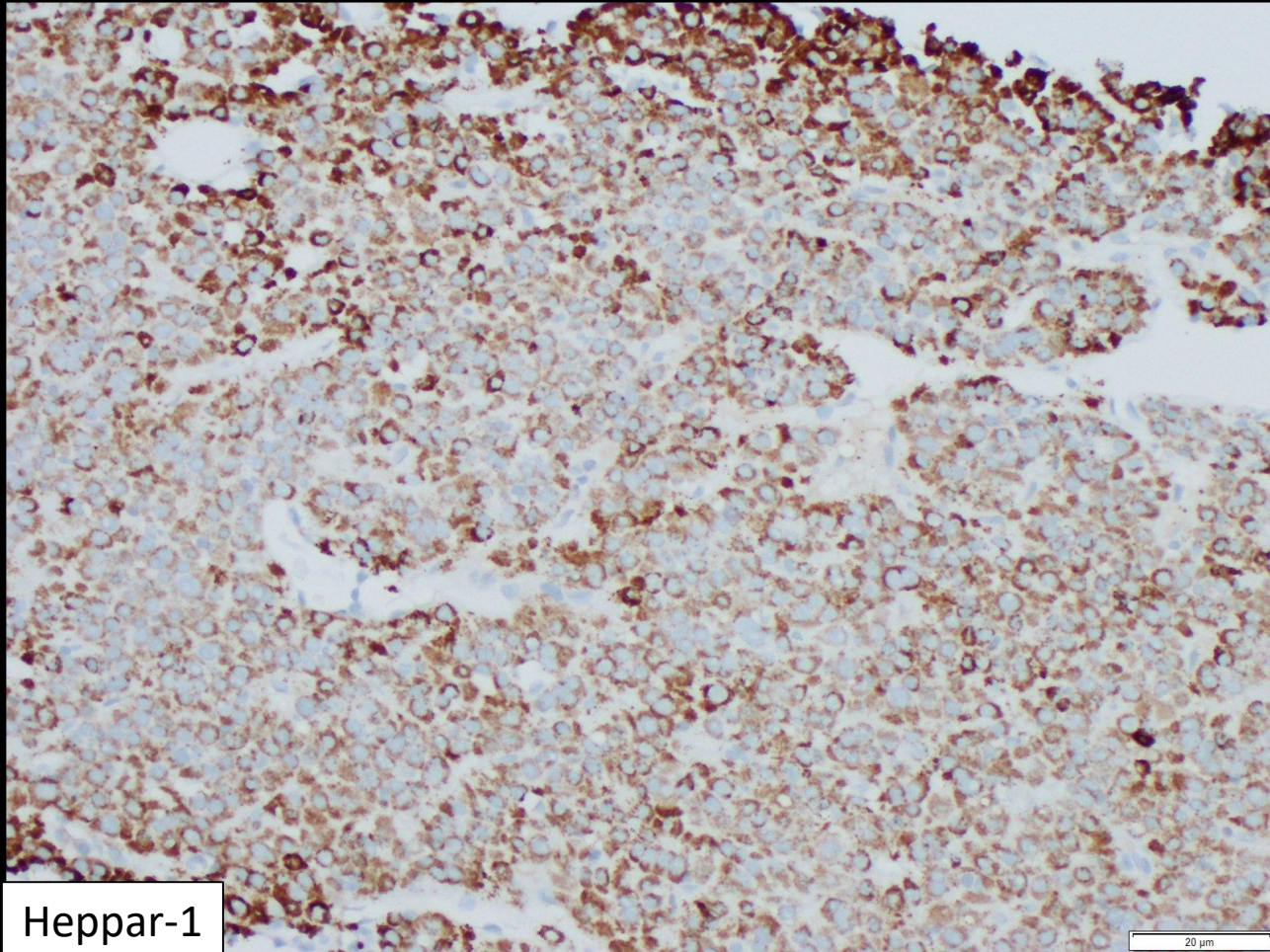


Introduction

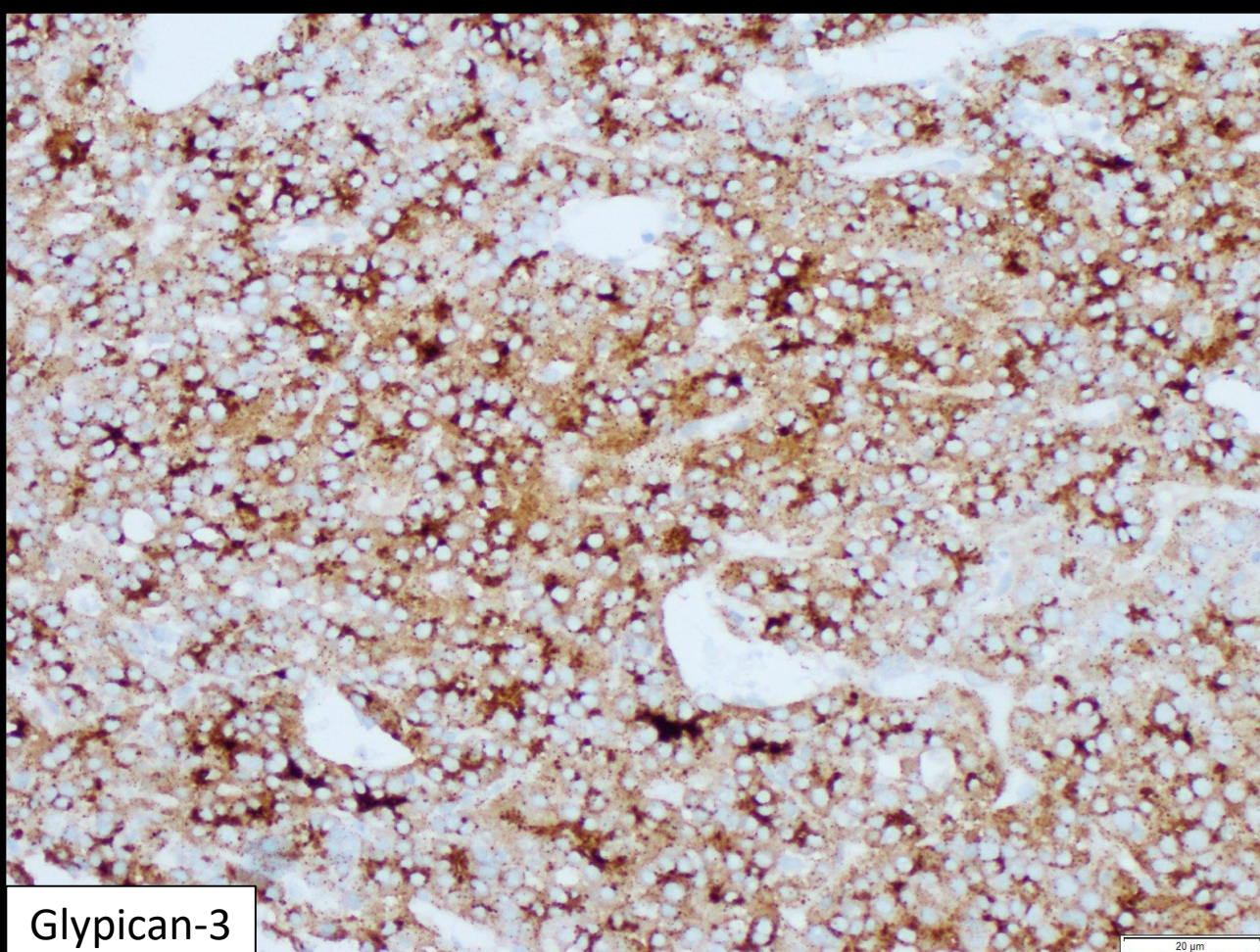
- Hepatocellular carcinoma (HCC) is the most common primary liver cancer, and the sixth most common human cancer overall. The incidence is increasing along with that of chronic liver disease.
- HCC is associated with a poor prognosis often due to a combination of delay in diagnosis and propensity for angioinvasion.
- Major histologic variants of HCC:
 - Clear cell
 - Lymphoepithelial
 - Steatohepatic
 - Schirrous
 - Fibrolamellar
- HCC with small cell histology (HCCSC) is an exceedingly rare variant.



H&E stain shows tumor composed of uniformly small, round to polygonal cells with scant to moderate amount of slightly eosinophilic, finely granular cytoplasm. In a pseudoglandular/tubular, trabecular, and solid growth pattern.



Heppar-1



Glypican-3

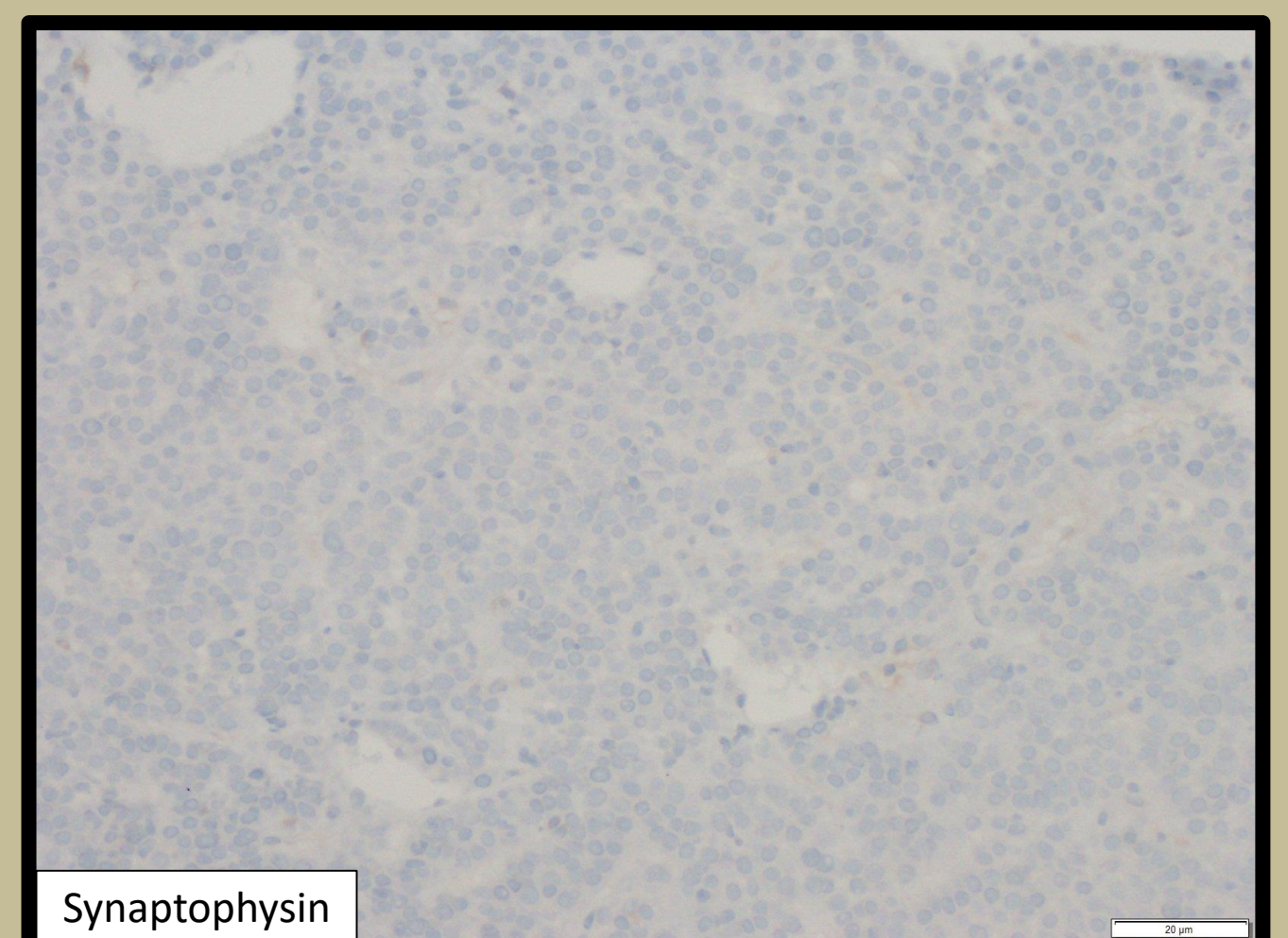
Tumor cells are definitively positive for heppar-1 and glypican-3.

Conclusion

These cases highlight the importance of astute evaluation of H&E stained slides as well as dedicated ancillary testing in reaching an accurate and timely diagnosis of HCCSC.

Discussion

- HCCSC may share many cytologic and architectural features with neuroendocrine tumors, as is observed in the presented cases which were initially misdiagnosed as metastatic neuroendocrine tumors.
- Further complicating the diagnosis, one of two tumors showed equivocal staining for synaptophysin, though staining was negative for other neuroendocrine markers.
- Additional reticulin stain highlighted thickened hepatic plates while P-CEA and CD10 highlighted a canalicular pattern.



Synaptophysin

Equivocal synaptophysin staining is observed in this case.