Liver, Stellate cell – Hyperplasia

**Figure Legend:** Figure 1 Stellate cell hyperplasia–arrow indicates spindloid morphology in a female B6C3F1 mouse from a chronic study. Figure 2 Stellate cell hyperplasia–arrow indicates stellate cells with a spindloid morphology in a female B6C3F1 mouse from a chronic study.

**Comment:** Hepatic stellate cell (Ito cell or perisinusoidal cell) hyperplasia is rare in mice and has not been documented in NTP rat studies. It consists of a diffuse or multifocal proliferation of stellate cells (fat-storing cells, as opposed to macrovesicular fat within hepatocytes) without prominent compression of surrounding parenchyma. Stellate cells store retinoid compounds and when activated may convert to a spindloid morphology (Figure 1 and Figure 2, arrow) and produce extracellular matrix proteins and collagen (scar tissue) in response to hepatic injury. Distinction from stellate cell tumors is based on the latter being more discrete and causing compression of surrounding hepatic parenchyma.

**Recommendation:** Proliferations of stellate cells should be documented and given a severity grade. If stellate cell tumors are present in the same study, it should be mentioned in the pathology narrative.
Liver, Stellate cell – Hyperplasia

References:


Abstract: http://www.cacheriverpress.com/books/pathmouse.htm

National Toxicology Program. 1987. NTP TR-324. Toxicology and Carcinogenesis Studies of Boric Acid (CAS No. 10043-35-3) in B6C3F1 Mice (Feed Studies). NTP, Research Triangle Park, NC.

Full-Text: http://tpx.sagepub.com/content/38/7_suppl/5S.full

Author:

Robert R. Maronpot, DVM, MS, MPH, DACVP, DABT, FIATP
Senior Pathologist
Experimental Pathology Laboratories, Inc.
Research Triangle Park, NC