Spongiosis Hepatis/Cystic Degeneration
Preneoplastic or Non-Neoplastic Lesion
Scientific Assessment

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Biological Characteristics and Potential
Spongiosis Hepatis / Cystic Degeneration

• In 1980s, lesion was considered to be not
  • Neoplastic
  • Preneoplastic

• In 1990s, lesions previously termed spongiosis hepatis were interpreted as “spongiotic pericytoma” by one experimental group that studied the genotoxic agent N-nitrosomorpholine (NNM) (American Journal of Pathology 146:903-913, 1995)
  ➢ However, multiple limitations of this publication as addressed in written statement
A lesion progressing from spongiosis hepatis to clear neoplasia has apparently never been noted by practicing toxicologic pathologist.

- No primary publication describing a rodent neoplasm that had histological characteristics to support origin from spongiosis hepatis

- A lesion progressing from spongiosis hepatis to clear neoplasia was not described in recent compendium of rodent liver lesions (Toxicologic Pathology 38:5S-81S, 2010)

- Tumors arising from liver pericytes (Ito cell tumors) have been recognized but are morphologically different than spongiosis hepatis
Implications of Rodent Spongiosis Hepatis Determining Human Cancer Risk

• Spongiosis hepatis has not been described in human liver
  • Reduces concern that increased incidence of spongiosis hepatis in treated compared to control rats is an indicator of human risk

• Spongiotic pericytoma in human has been described in a single published report based on recent literature search
  • Histology of this lesion is substantially different than spongiosis hepatis in rats
  • Lesion in human is therefore not a counterpart to the spongiosis hepatis lesion in rats.
Conclusion of Scientific Assessment

• **Spongiosis hepatis / cystic degeneration:**
  • Is a non-neoplastic lesion
  • Is **NOT** a preneoplastic lesion

• **Spongiosis hepatis in the rat is not an indication of human cancer risk**