



NTP
National Toxicology Program

Hepatoblastoma in the Mouse

David Malarkey, DVM, PhD
National Institute of Environmental Health Sciences

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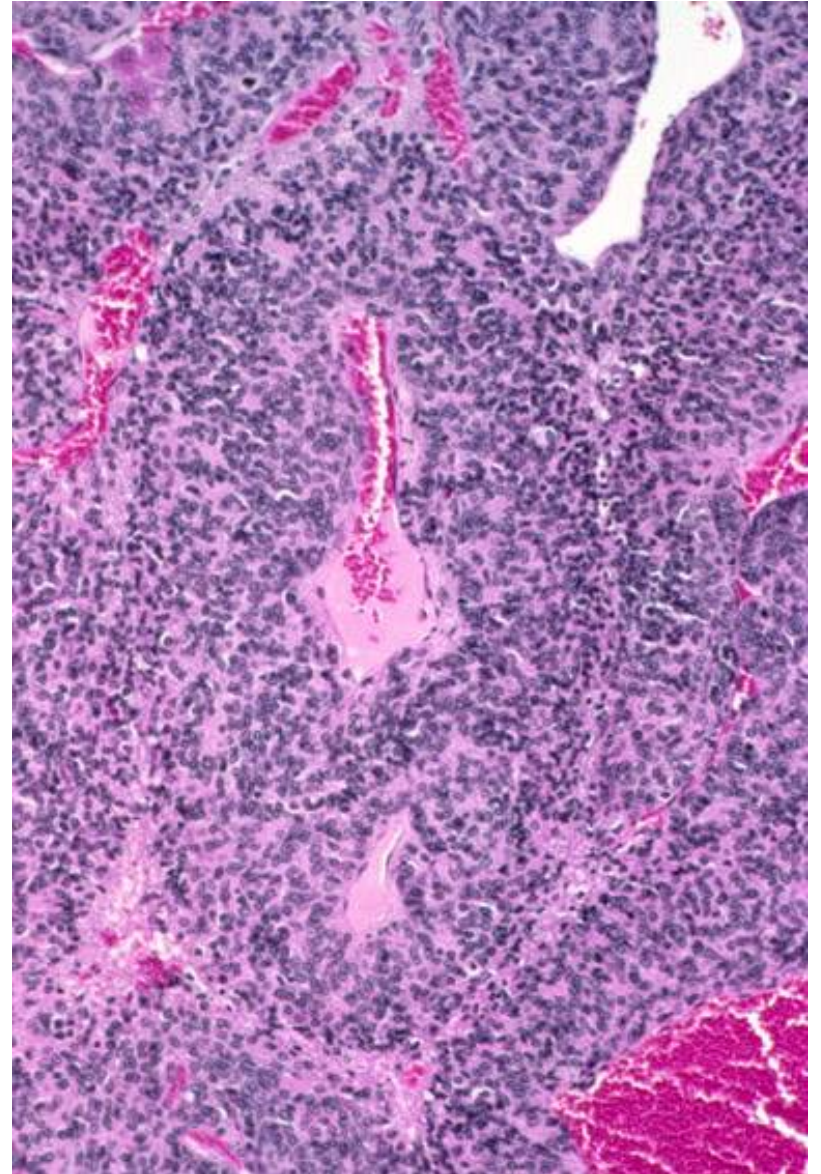
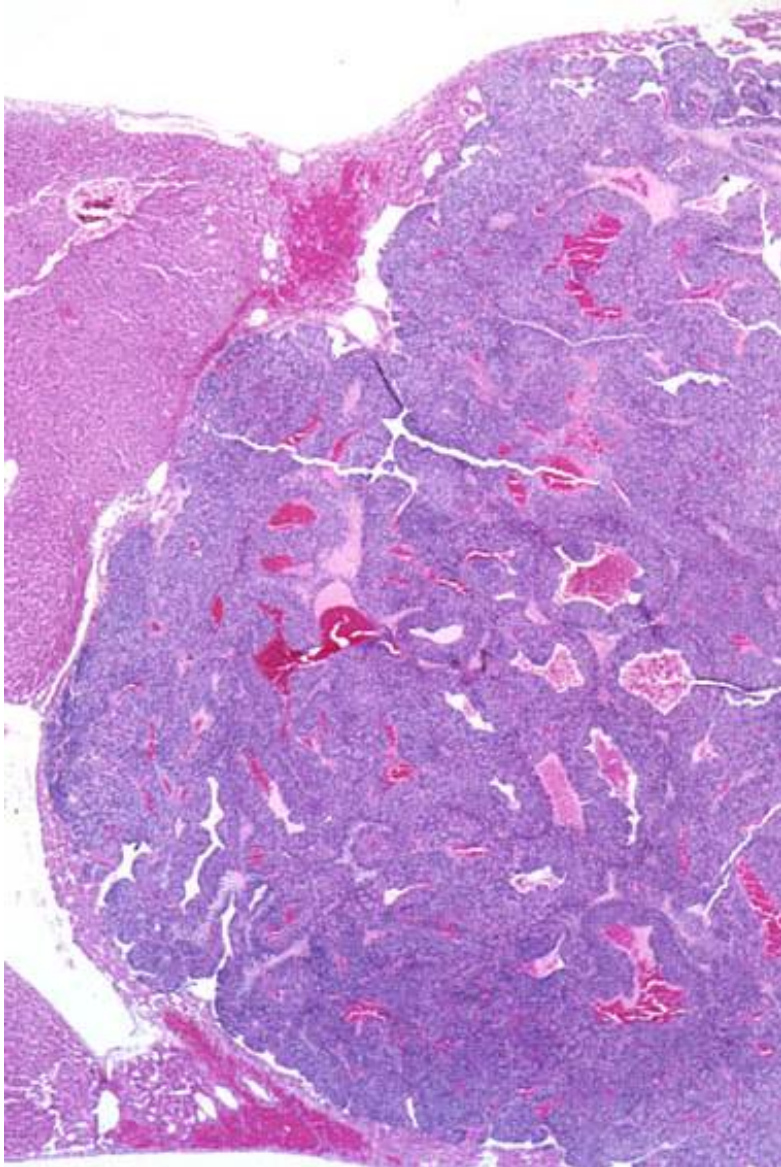




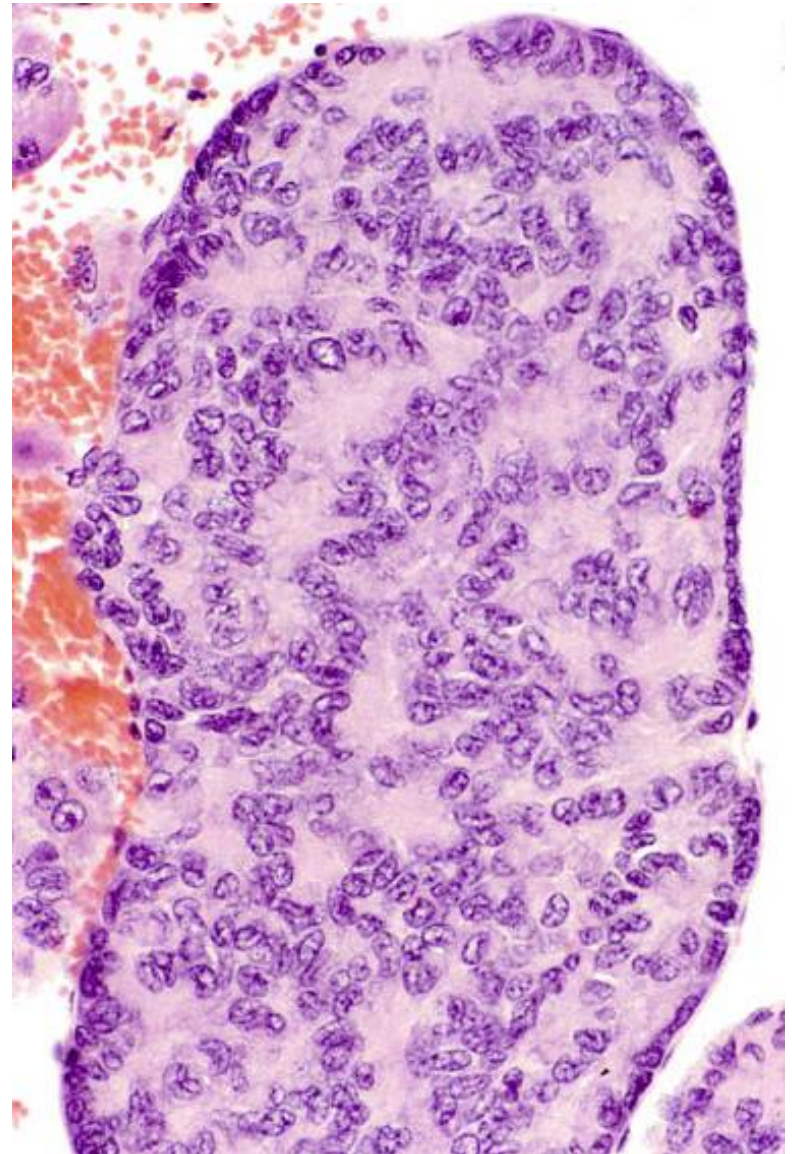
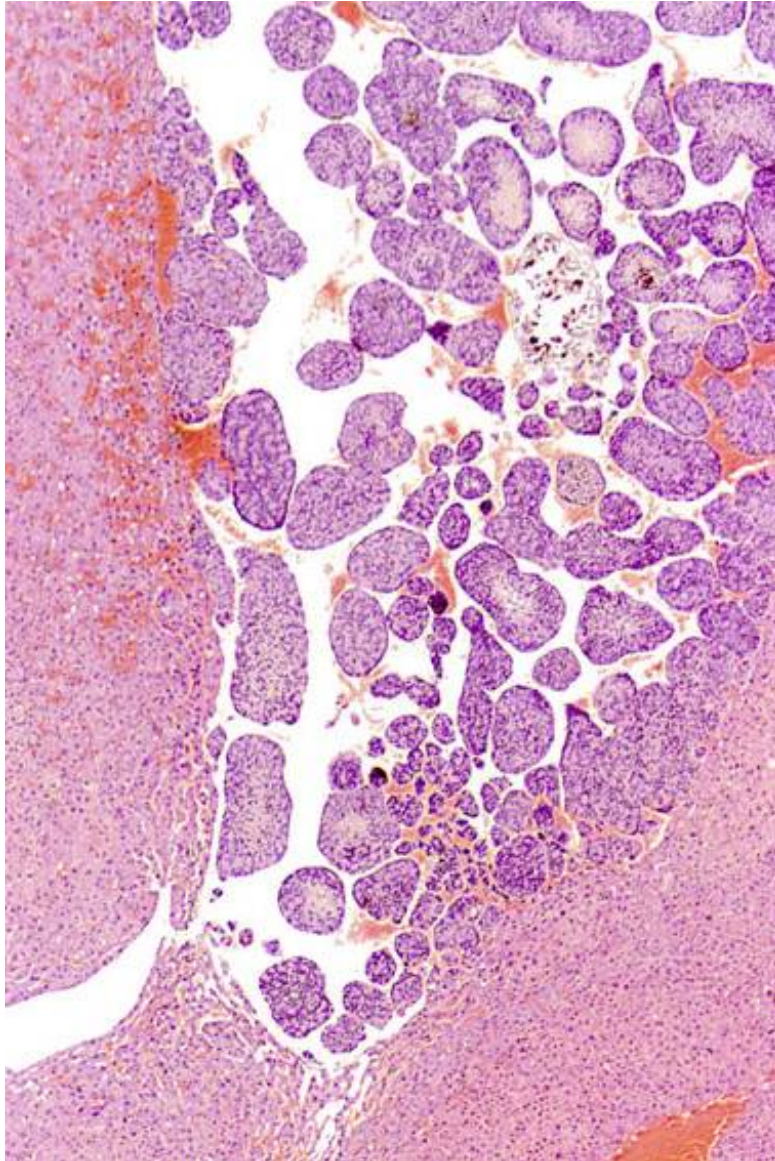
Hepatoblastoma in the mouse

- primitive, poorly differentiated variant of an hepatocellular neoplasm
- can arise from adenoma or carcinoma
- relatively late onset
- males >>> females
- metastatic rate of ~ 25-50%
- B6C3F1, D2B6F1, B6D2F1, CBAxC57BL/6J, C3H, CF1, BDF1, Swiss Webster

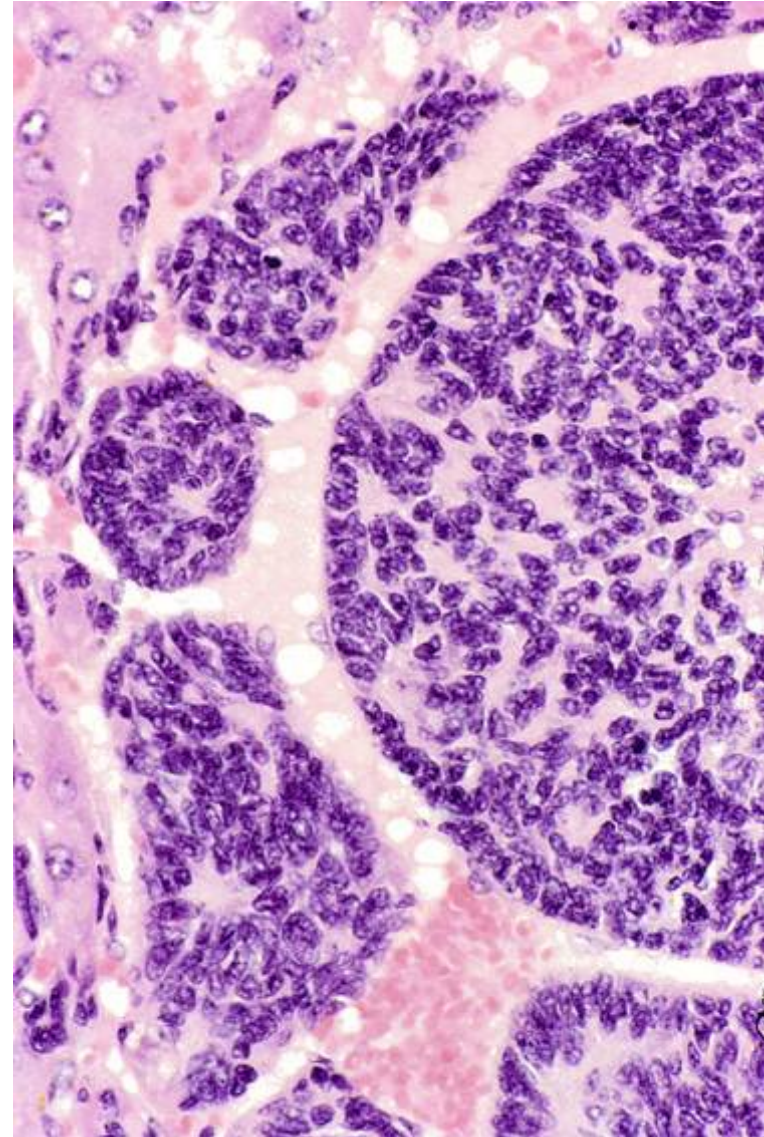
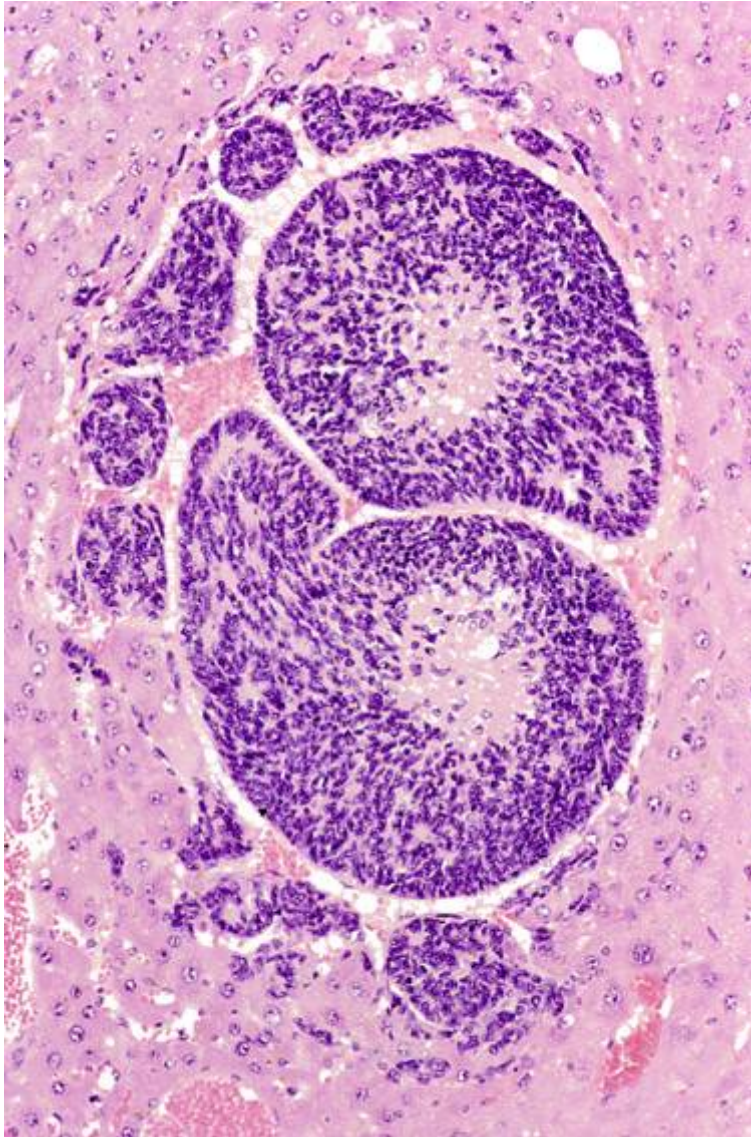
Hepatoblastoma



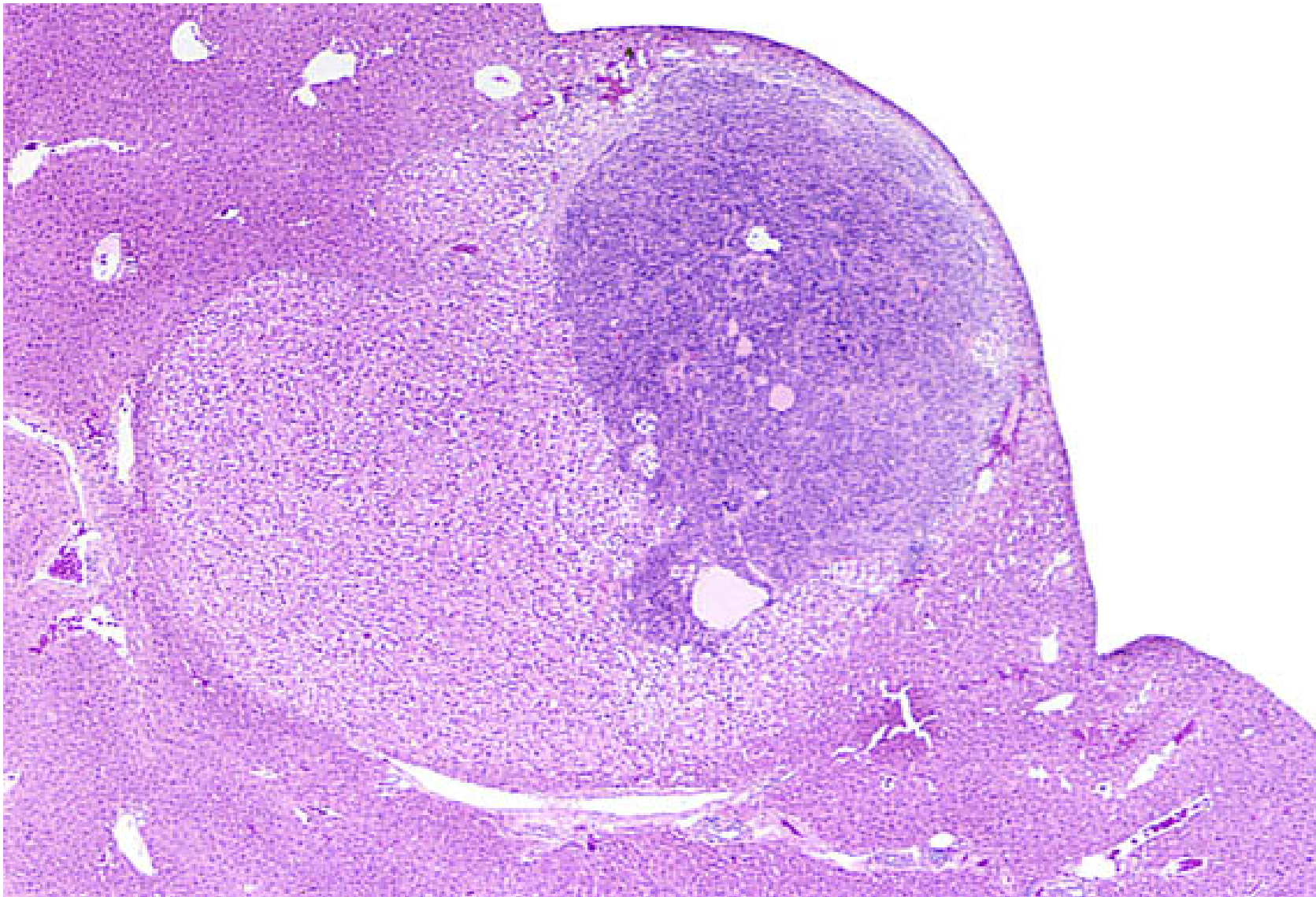
Hepatoblastoma



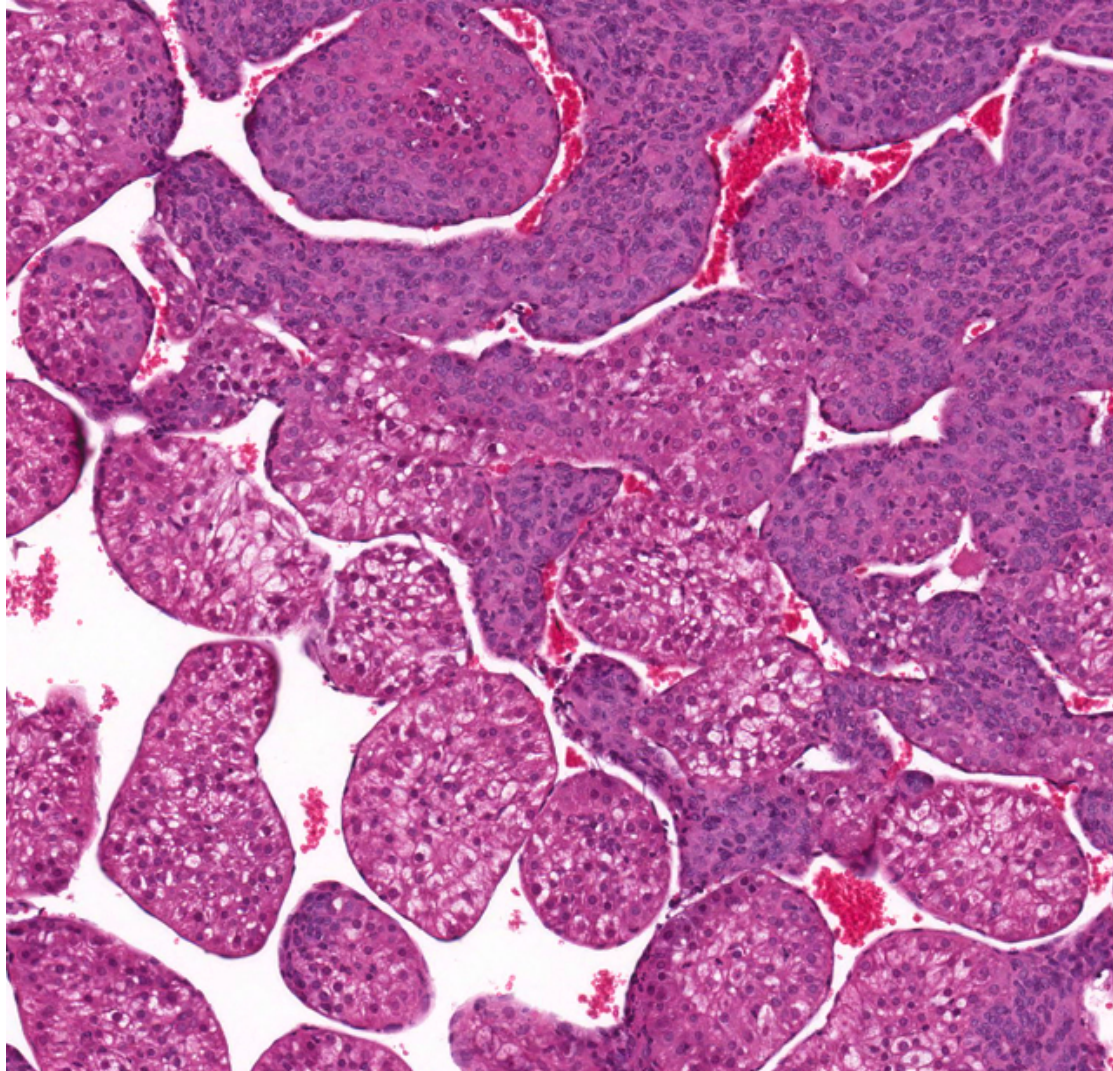
Hepatoblastoma



Hepatoblastoma in an adenoma



Hepatoblastoma in a carcinoma





Incidence of hepatoblastomas in B6C3F1 mice in NTP studies

incidence (mean; range)

males 91 / 2954 (3.1%; 0-34%)

females 9 / 3046 (0.3%; 0-2%)

Grace Kissling, NTP

Hepatoblastoma – Molecular studies

- Molecular studies aimed at understanding the pathogenesis of hepatoblastoma and the relationship between hepatoblastoma and hepatocellular carcinoma (HCC)
- Phenotypic characterization of hepatoblastomas in mice
- Global gene expression analysis
 - Comparing hepatoblastoma, HCC, and non-tumor liver in same animal
 - Identification of differentially altered molecular pathways
- Mutation analysis
 - Common mutational spectrum – common origin of hepatoblastoma/HCC
 - Differing mutational spectrum – supports differing origin/convergent pathogenesis