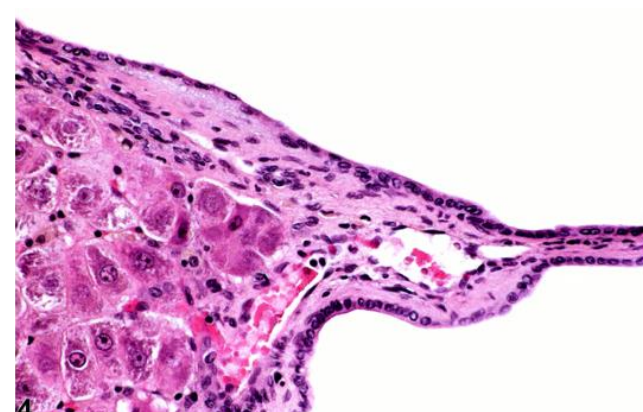
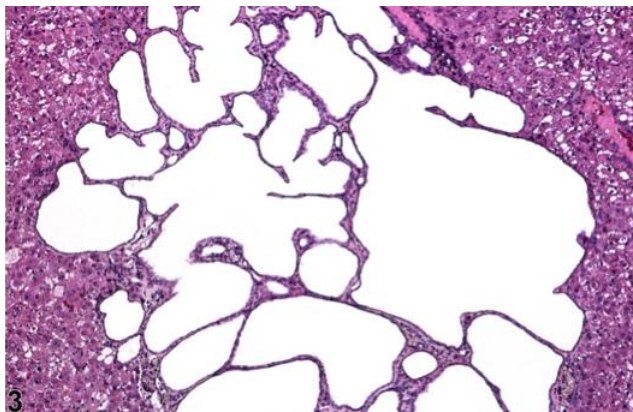
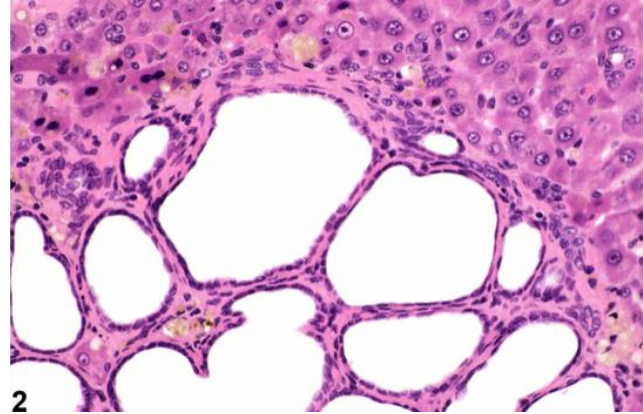
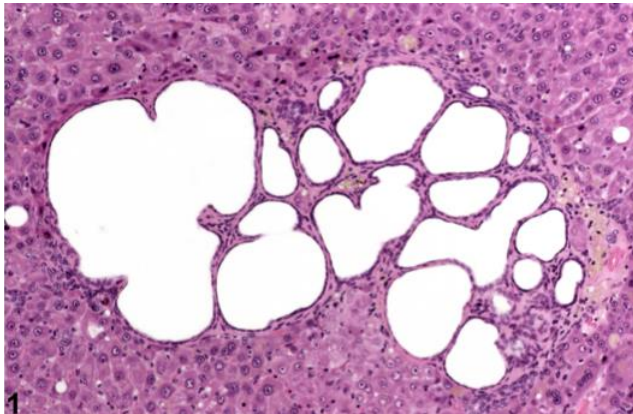




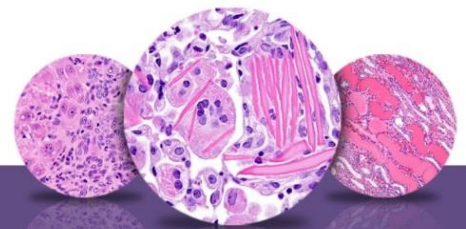
# NTP Nonneoplastic Lesion Atlas

## Liver, Bile duct – Cyst



**Figure Legend:** **Figure 1** Bile duct cysts in a female Harlan Sprague-Dawley rat from a chronic study. **Figure 2** Bile duct cysts in a female Harlan Sprague-Dawley rat from a chronic study (higher magnification of Figure 1). **Figure 3** Bile duct cyst–multiloculated cyst in a female Harlan Sprague-Dawley rat from a chronic study. **Figure 4** Bile duct cysts in a female Harlan Sprague-Dawley rat from a chronic study.

**Comment:** Single and multiloculated biliary cysts can occur spontaneously in older rats and mice. They can occur as single dilated biliary structures, multiple adjacent dilated biliary structures (Figure 1 and Figure 2), or a multiloculated cyst (Figure 3). Biliary cysts may accompany hepatic toxicity and may be associated with peripheral or sub-basilar collagen deposition (Figure 4). They are typically lined by a single layer of flattened or low cuboidal epithelium (Figure 4), with little evidence of active proliferation. In contrast to cholangiomas, they do not compress the adjacent hepatic parenchyma.



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**Recommendation:** Small biliary cysts may occasionally be seen in untreated rats but are more often associated with treatment. Consequently, they should be documented whenever present and given a severity grade.

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