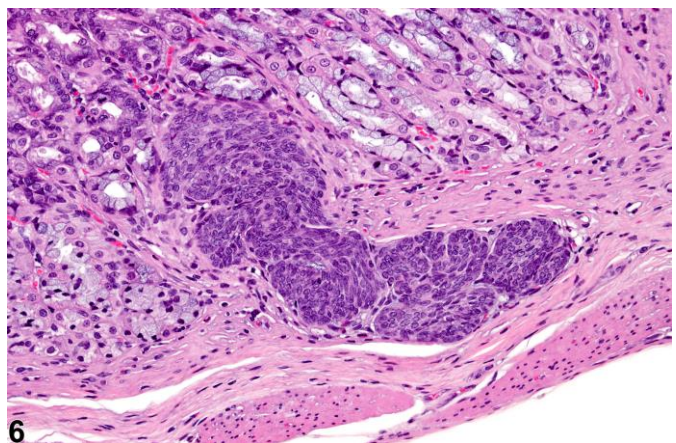
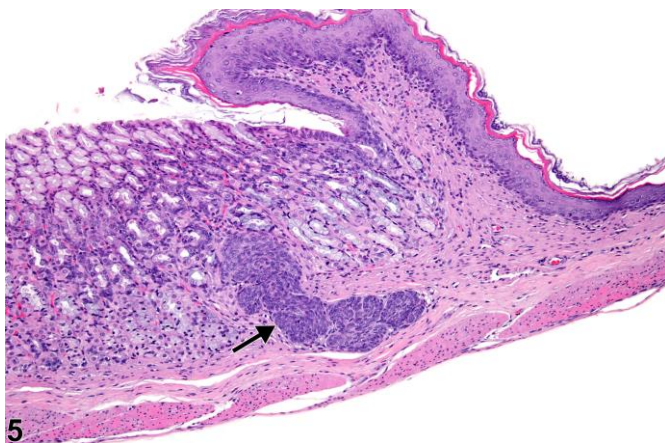
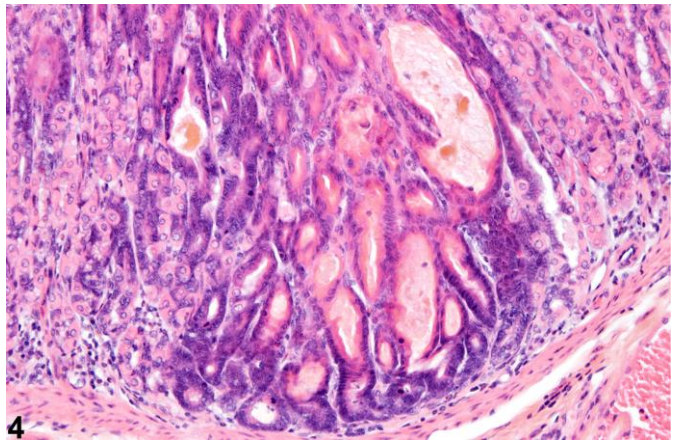
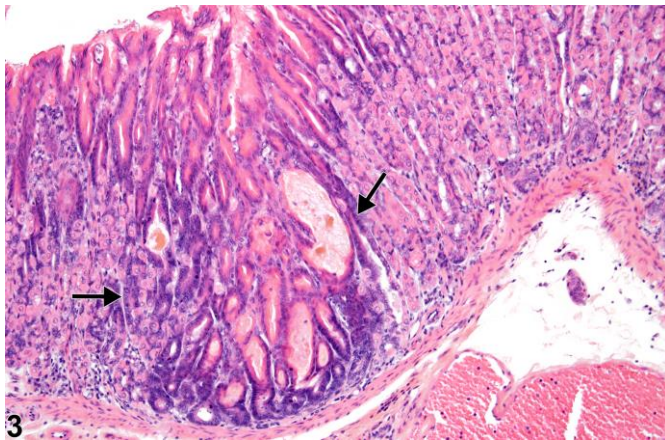
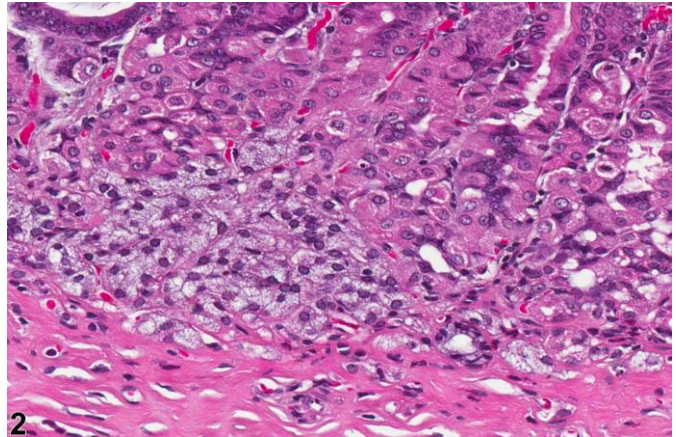
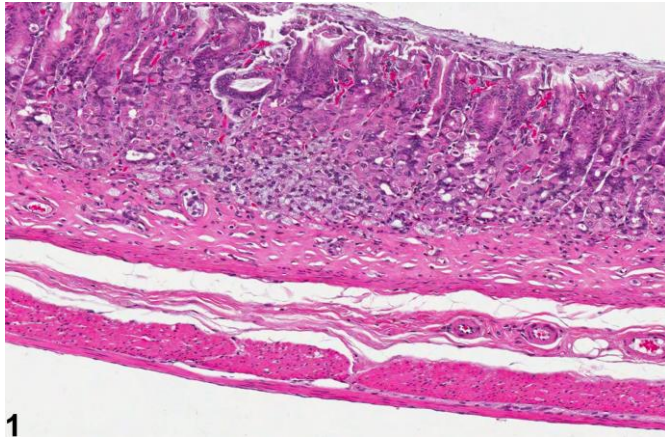


NTP Nonneoplastic Lesion Atlas

Stomach, Glandular Stomach, Epithelium – Hyperplasia





NTP Nonneoplastic Lesion Atlas

Stomach, Glandular Stomach, Epithelium – Hyperplasia

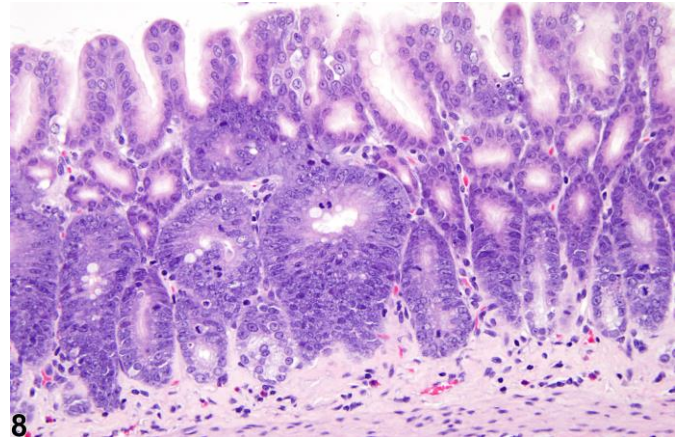
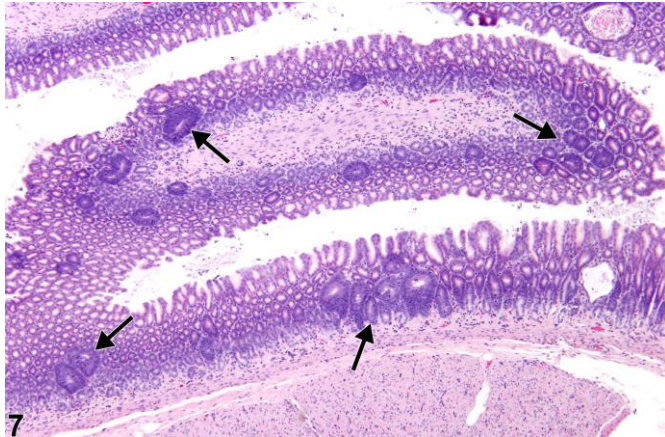
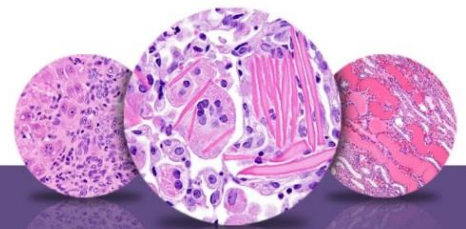


Figure Legend: **Figure 1** Stomach, Glandular stomach, Epithelium - Hyperplasia in female F344/N rat from a chronic study. There is a focal area of hyperplasia in the mucosa. **Figure 2** Stomach, Glandular stomach, Epithelium - Hyperplasia in a female F344/N rat from a chronic study (higher magnification of Figure 1). The basophilic cells are smaller and more crowded, and there is slight compression of the adjacent mucosa. **Figure 3** Stomach, Glandular stomach, Epithelium - Hyperplasia in a male B6C3F1 mouse from a chronic study. There is an expansile focus of basophilic cells with glandular dilation (arrows). **Figure 4** Stomach, Glandular stomach, Epithelium - Hyperplasia in a male B6C3F1 mouse from a chronic study (higher magnification of Figure 3). The nuclei are crowded, but there is little compression of the adjacent mucosa. **Figure 5** Stomach, Glandular stomach, Epithelium - Hyperplasia in female F344/NTac rat from a subchronic study. There is a focus of proliferating epithelial cells (arrow) extending into the submucosa. **Figure 6** Stomach, Glandular stomach, Epithelium - Hyperplasia in female F344/NTac rat from a subchronic study (higher magnification of Figure 5). The hyperplastic cells are smaller and more basophilic than the normal glandular epithelial cells. **Figure 7** Stomach, Glandular stomach, Epithelium - Hyperplasia in a male F344/N rat from a chronic study. There are numerous foci of hyperplasia within the mucosa (arrows). **Figure 8** Stomach, Glandular stomach, Epithelium - Hyperplasia in a male F344/N rat from a chronic study (higher magnification of Figure 7). The hyperplastic cells are small, crowded, and basophilic.

Comment: Glandular stomach lesions are quite rare in NTP mouse studies. Hyperplasia of the glandular stomach mucosa is not common in controls but may be seen in regenerative hyperplasia, such as at the margin of an ulcer or erosion. Glandular hyperplasia is characterized by an increase in density of glands within the mucosa. In rats, hyperplasia may be a preneoplastic lesion. Focal



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hyperplasia is seen occasionally in mice. However, in mice this is not considered to be a preneoplastic change; the incidence is not increased in studies with adenocarcinomas of the glandular stomach, and progression from focal hyperplasia to adenocarcinoma has not been observed.

Recommendation: Hyperplasia of the glandular stomach is diagnosed and graded based on the extent of the lesion and the number of cells within the gastric glands. When atypical hyperplasia is diagnosed, the atypical features should be clearly described in the pathology narrative (see Stomach, Glandular Stomach, Epithelium - Hyperplasia, Atypical). Associated lesions, such as necrosis and inflammation, should be diagnosed separately. If the hyperplasia is thought to be secondary to necrosis or inflammation (e.g., regenerative), it should be made clear in the pathology narrative.

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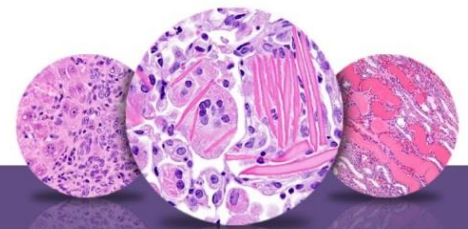
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Authors:

Linda H. Kooistra, DVM, PhD, DACVP
Pathologist
Charles River Laboratories, Inc.
Research Triangle Park, NC

Abraham Nyska, DVM, Diplomate ECVF, Fellow IATP
Expert in Toxicologic Pathology
Visiting Full Professor of Pathology
Sackler School of Medicine, Tel Aviv University
Timrat Israel