Stomach, Glandular Stomach – Infiltration, Cellular

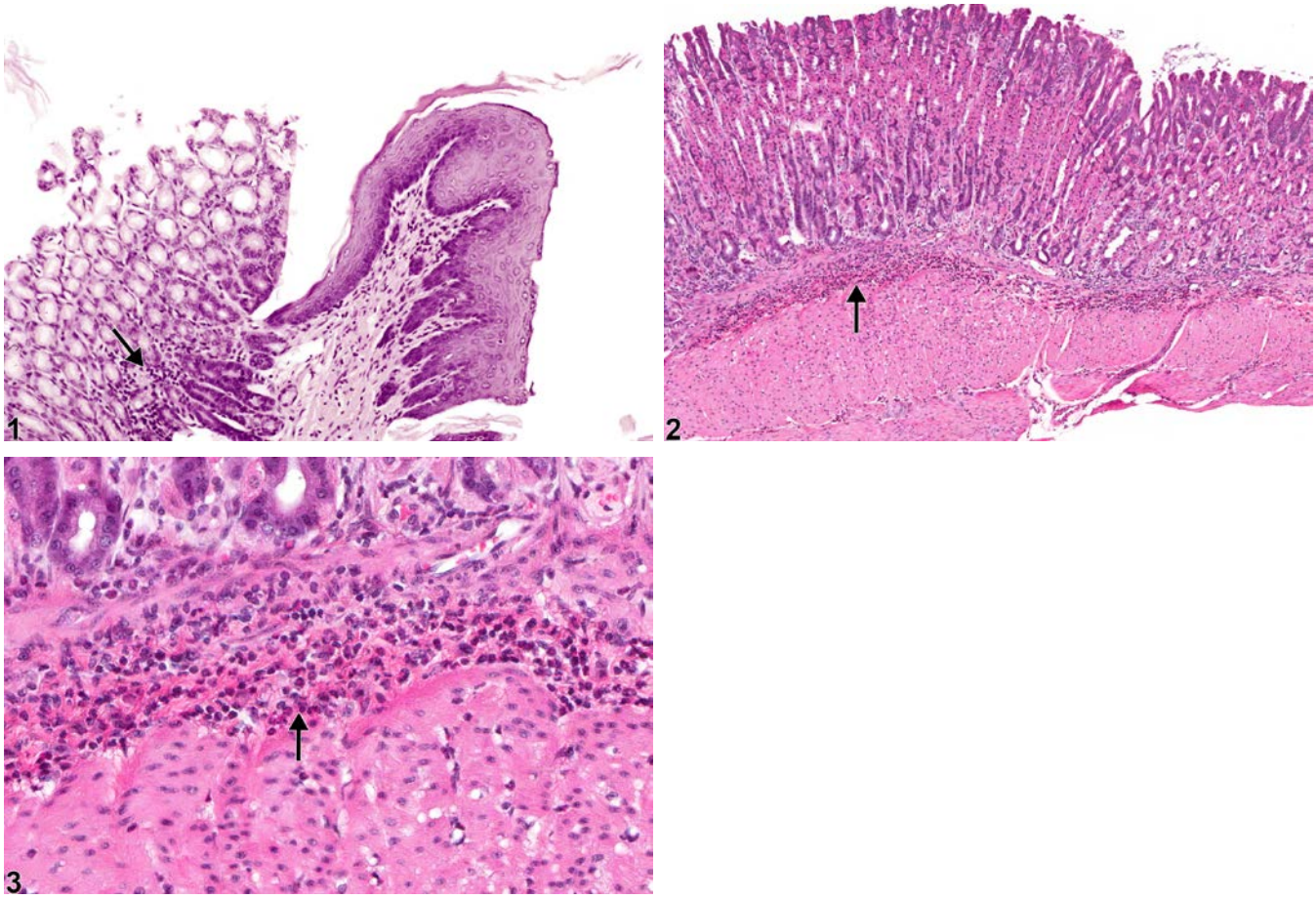
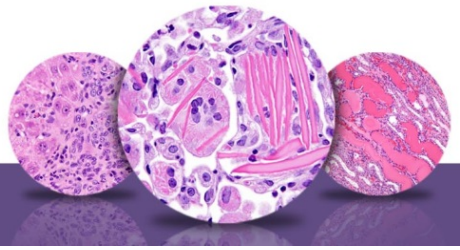


Figure Legend: Figure 1 Stomach, Glandular stomach - Infiltration, Cellular, Lymphocyte in a male F344/N rat from a chronic study. Lymphocytic cellular infiltrate is present in the deep mucosa of glandular stomach (arrow). **Figure 2** Stomach, Glandular stomach - Infiltration, Cellular, Eosinophil in a female B6C3F1 mouse from a subchronic study. Eosinophilic cellular infiltrate is present in the submucosa of the glandular stomach (arrow). **Figure 3** Stomach, Glandular stomach - Infiltration, Cellular, Eosinophil in a female B6C3F1 mouse from a subchronic study (higher magnification of Figure 3). Eosinophilic cellular infiltrate is preset in the submucosa of the glandular stomach (arrow).

Comment: The term “cellular infiltrate” is often used to describe the presence of inflammatory cells without other evidence of an inflammatory process (e.g., edema, necrosis or degeneration of cells, evidence of vascular injury). Infiltrates usually consist of lymphocytes, mast cells, or eosinophils. Lymphocytic infiltrates in the glandular stomach can be an incidental finding; they typically appear in the



deep aspect of the mucosa and in the submucosa. In Figure 1 (arrow), lymphocytic infiltrates are present in the deep mucosa of the glandular stomach and in the propria of the forestomach. Eosinophils (Figure 2 and Figure 3, arrows) are recruited from the blood stream into most organs in response to eosinophil chemoattractants present in allergic and parasitic diseases and indicate a hypersensitivity reaction.

Focal collections of mast cells can occasionally be found in the submucosa of the stomach. Mast cells have been shown to contribute importantly to acute allergic reactions, late-phase reactions, and chronic allergic inflammation. Focal accumulations of mast cells in the submucosa of the gastrointestinal tract are usually considered an incidental lesion in NTP studies. Such accumulations may be confused with mast cell tumor. Focal accumulations of mast cells tend to be smaller and less well circumscribed than mast cell tumors and infiltrate between structures rather than compressing or effacing adjacent structures.

Recommendation: The term “infiltrate, cellular” should be used when inflammatory cells are present with no other features of inflammation (e.g., edema, hemorrhage, degeneration, necrosis). Generally, infiltrates of inflammatory cells are often quite small and may not warrant a diagnosis. When diagnosed, infiltrates should be graded based on the number of cells and the total tissue area affected. A modifier should be used to indicate the specific type of cell (e.g., lymphocyte, eosinophil, mast cell).

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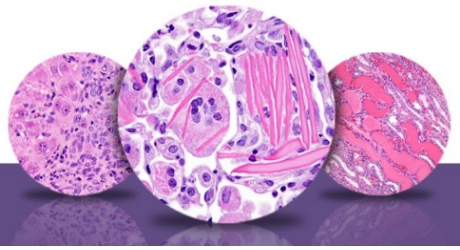

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