



NTP Nonneoplastic Lesion Atlas

Tongue, Epithelium – Degeneration

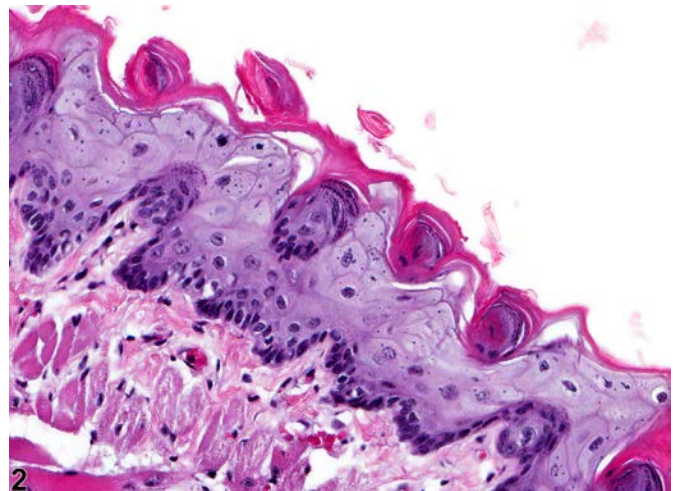
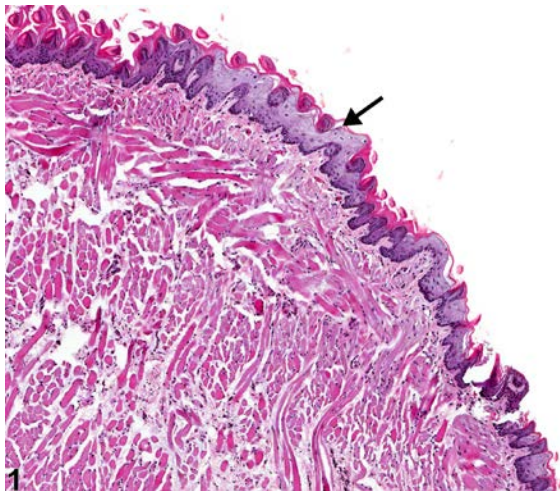


Figure Legend: **Figure 1** Tongue, Epithelium - Degeneration in a male F344/N rat from a chronic study. An area on the tongue has epithelial cells that are pale and swollen (arrow). **Figure 2** Tongue, Epithelium - Degeneration in a male F344/N rat from a chronic study (higher magnification of Figure 1). The degenerating epithelial cells are pale and swollen.

Comment: Degeneration of cells is a fundamental expression of cell injury that is considered to be reversible. It can manifest in many ways, including increased cell size and volume resulting from an overload of water caused by a failure of the cell to maintain normal homeostasis and regulate the ingress and excretion of water. This may also cause the cytoplasm to appear paler than that of undamaged cells (Figure 1 and Figure 2). The cytoplasm of affected cells may contain translucent vacuoles that represent swollen mitochondria and dilated cisternae of the Golgi and endoplasmic reticulum. Subjacent tissue can be variably infiltrated with inflammatory cells.

Recommendation: Degeneration should be diagnosed and graded whenever present. If the epithelium has been lost, exposing the underlying dermis, then “ulcer” is diagnosed. The severity grade for degeneration is based on the degree of cellular swelling and extent and number of areas affected. Associated lesions, such as inflammation, should not be diagnosed unless warranted by severity.

References:

Myers RK, McGavin MD. 2007. Cellular and tissue responses to injury. In: Pathologic Basis of Veterinary Disease, 4th ed (McGavin MD, Zachary JF, eds). Mosby, St Louis, MO, 12-62.



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