



NTP Nonneoplastic Lesion Atlas

Nose, Olfactory Epithelium – Atrophy

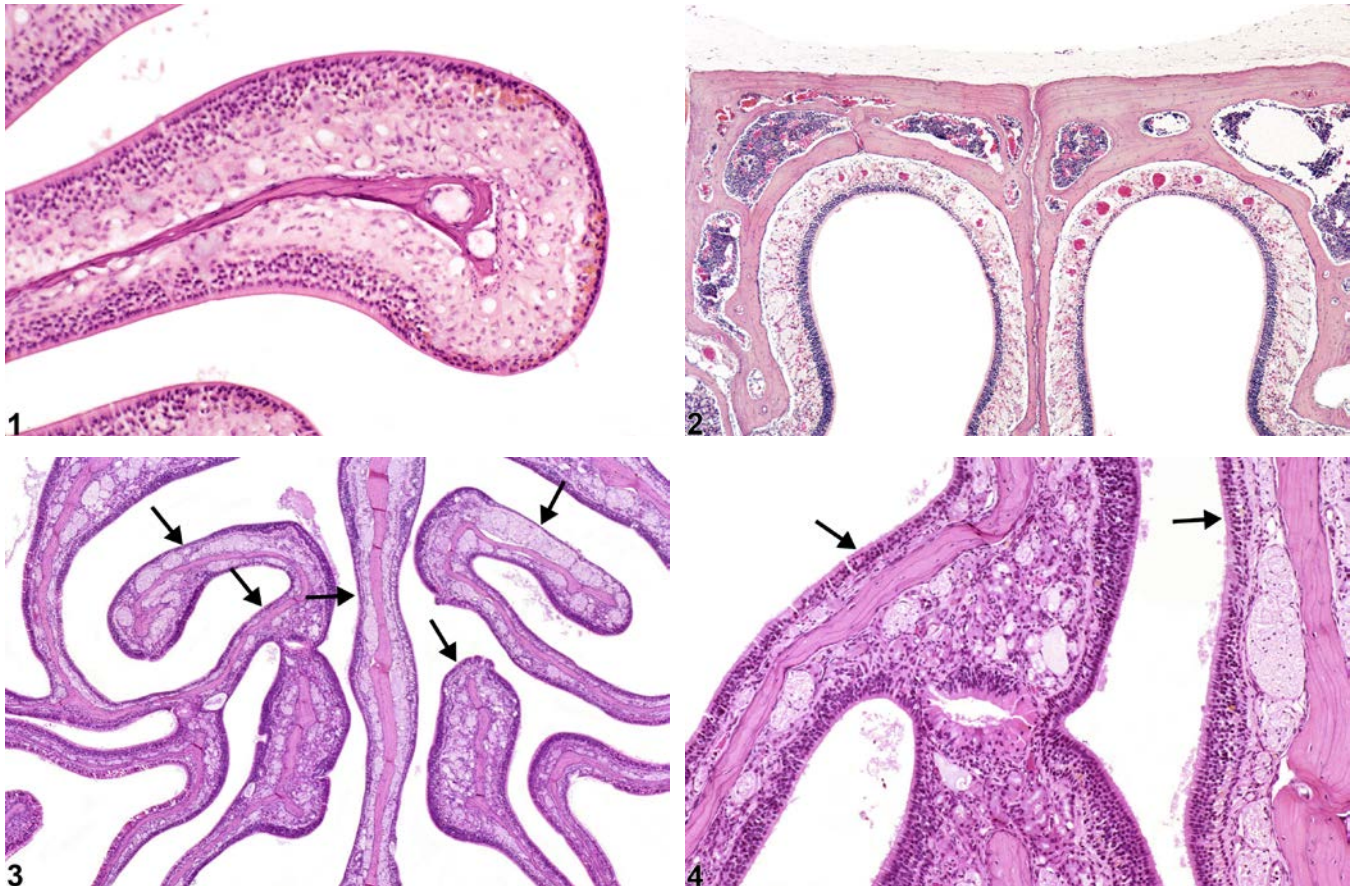


Figure Legend: **Figure 1** Nose, Olfactory epithelium - Atrophy in a female B6C3F1/N mouse from a chronic study. The olfactory epithelium on the tip of the turbinate is thin due to loss of cells. **Figure 2** Nose, Olfactory epithelium - Atrophy in a male B6C3F1/N mouse from a chronic study. Focal loss of cells results in thinning of the olfactory epithelium in the dorsal meatus at level II. **Figure 3** Nose, Olfactory epithelium - Atrophy in a male F344/N rat from a chronic study. The olfactory epithelium is thin in multiple areas (arrows). **Figure 4** Nose, Olfactory epithelium - Atrophy in a male F344/N rat from a chronic study (higher magnification of Figure 3). The olfactory epithelium is thin (arrows) due to loss of cells.

Comment: Olfactory epithelial atrophy is a loss of cells from the epithelium, resulting in a thinner and less cellular epithelium (Figure 1, Figure 2, Figure 3, and Figure 4). The epithelial surface may be covered with cuboidal to columnar nonciliated epithelium. It is often part of a spectrum of changes in



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the nose that includes inflammation, degeneration or necrosis, and respiratory or squamous metaplasia. In fact, olfactory epithelial atrophy is often the end result of degeneration or necrosis of the olfactory epithelium. The underlying turbinate bone may also be atrophic.

Recommendation: Olfactory epithelial atrophy should be diagnosed when a lesion is clearly separate from other olfactory epithelial changes such as degeneration, necrosis, or respiratory epithelial metaplasia. Inflammation, olfactory nerve atrophy, and turbinate atrophy may accompany the epithelial changes and should be diagnosed separately (see Nose - Inflammation; Nose, Nerve - Atrophy; and Nose, Turbinate - Atrophy).

References:

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Authors:

Rodney A. Miller, DVM, PhD, DACVP
NC Pathology Group Manager
Senior Pathologist
Experimental Pathology Laboratories, Inc.
Research Triangle Park, NC

Mark F. Cesta, DVM, PhD, DACVP
Staff Scientist, NTP Pathologist
Cellular and Molecular Pathology Branch
Division of the National Toxicology Program
National Institute of Environmental Health Sciences
Research Triangle Park, NC