



NTP Nonneoplastic Lesion Atlas

Eye, Conjunctiva – Edema

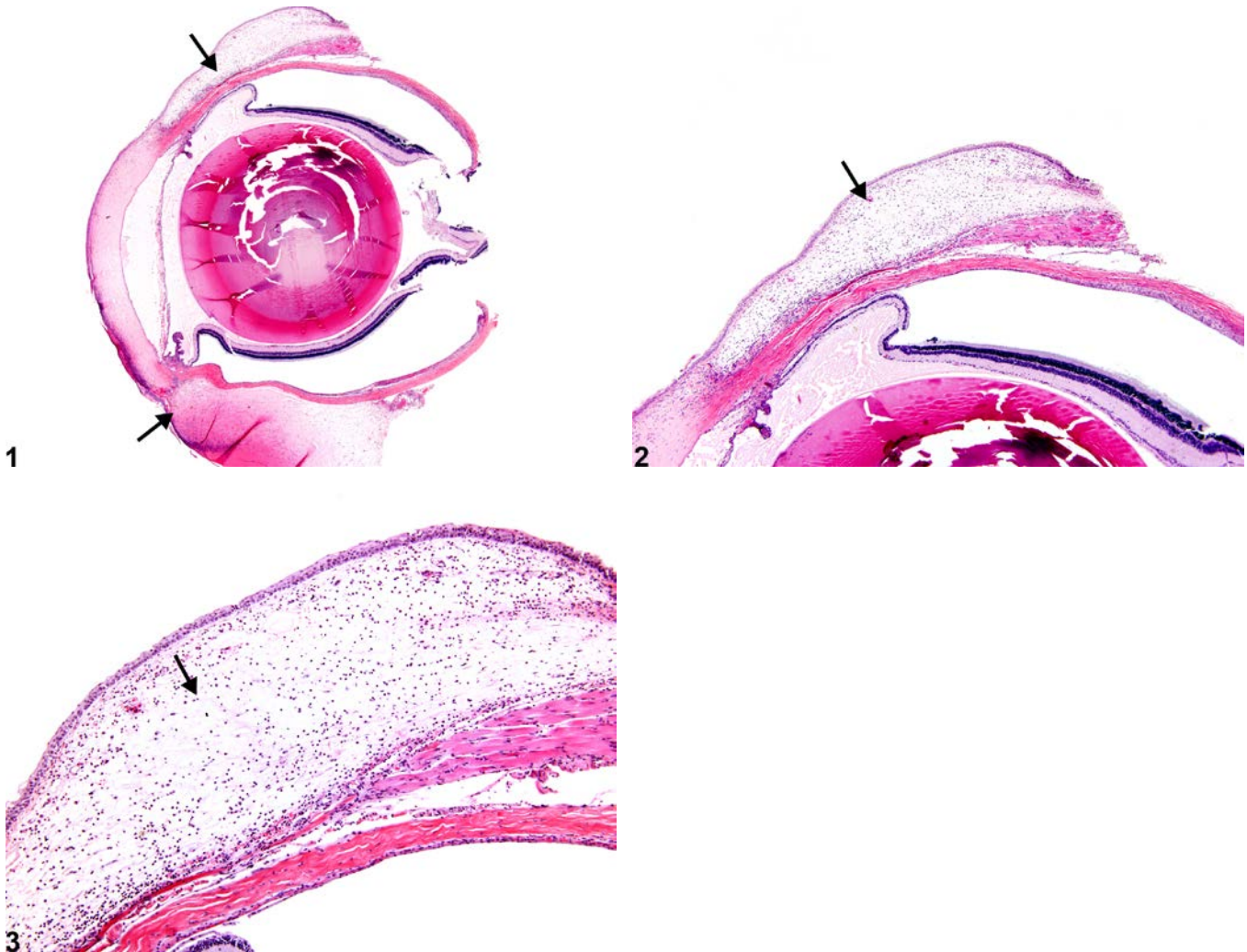
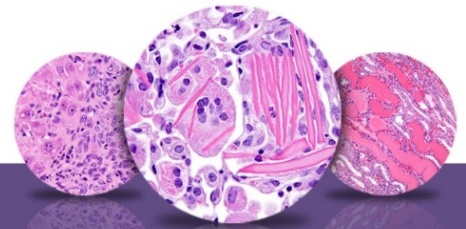


Figure Legend: **Figure 1** Eye, Conjunctiva - Edema in a female F344/N rat from a chronic study. There is diffuse swelling of the bulbar conjunctiva (arrows) due to accumulation of fluid; inflammatory cells are also present. **Figure 2** Eye, Conjunctiva - Edema in a female F344/N rat from a chronic study (higher magnification of Figure 1). The bulbar conjunctiva is expanded by clear to pale eosinophilic fluid (arrow); inflammatory cells are also present. **Figure 3** Eye, Conjunctiva - Edema in a female F344/N rat from a chronic study (higher magnification of Figure 1). There is edema of the bulbar conjunctiva characterized by accumulation of clear to pale eosinophilic fluid and inflammatory cells.



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Comment: Edema of the bulbar conjunctiva (Figure 1, Figure 2, and Figure 3) is characterized by diffuse swelling due to accumulation of clear to pale eosinophilic fluid. Clinically, conjunctival edema is referred to as chemosis. It is a nonspecific finding secondary to such causes as topical irritants, allergens, trauma, and infectious agents. Inflammatory cells may be present in the edematous areas.

Recommendation: Conjunctival edema should be diagnosed and assigned a severity grade. If located in the bulbar conjunctiva, edema can be diagnosed under the organ/subtopography “eye, conjunctiva.” If located in the palpebral conjunctiva, it can be diagnosed under the organ/subtopography of “skin, eyelid.” If secondary to another process (e.g., inflammation), conjunctival edema should not be diagnosed separately (unless warranted by severity) but should be described in the narrative.

References:

Maurer JK, Parker RD. 1996. Light microscopic comparison of surfactant-induced eye irritation in rabbits and rats at three hours and recovery/day 35. *Toxicol Pathol* 24:403-411.
Abstract: <http://tpx.sagepub.com/content/24/4/403.short>

Maurer JK, Parker RD, Carr GJ. 1998. Ocular irritation: Microscopic changes occurring over time in the rat with surfactants of known irritancy. *Toxicol Pathol* 26:217-225.
Abstract: <http://tpx.sagepub.com/content/26/2/217.short>

National Toxicology Program. 1994. NTP TR-437. Toxicology and Carcinogenesis Studies of Hexachlorocyclopentadiene (CAS No. 77-47-4) in F344/N Rats and B6C3F₁ Mice (Inhalation Studies). NTP, Research Triangle Park, NC.
Abstract: <http://ntp.niehs.nih.gov/go/6018>

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