



NTP Nonneoplastic Lesion Atlas

Esophagus, Muscularis - Degeneration

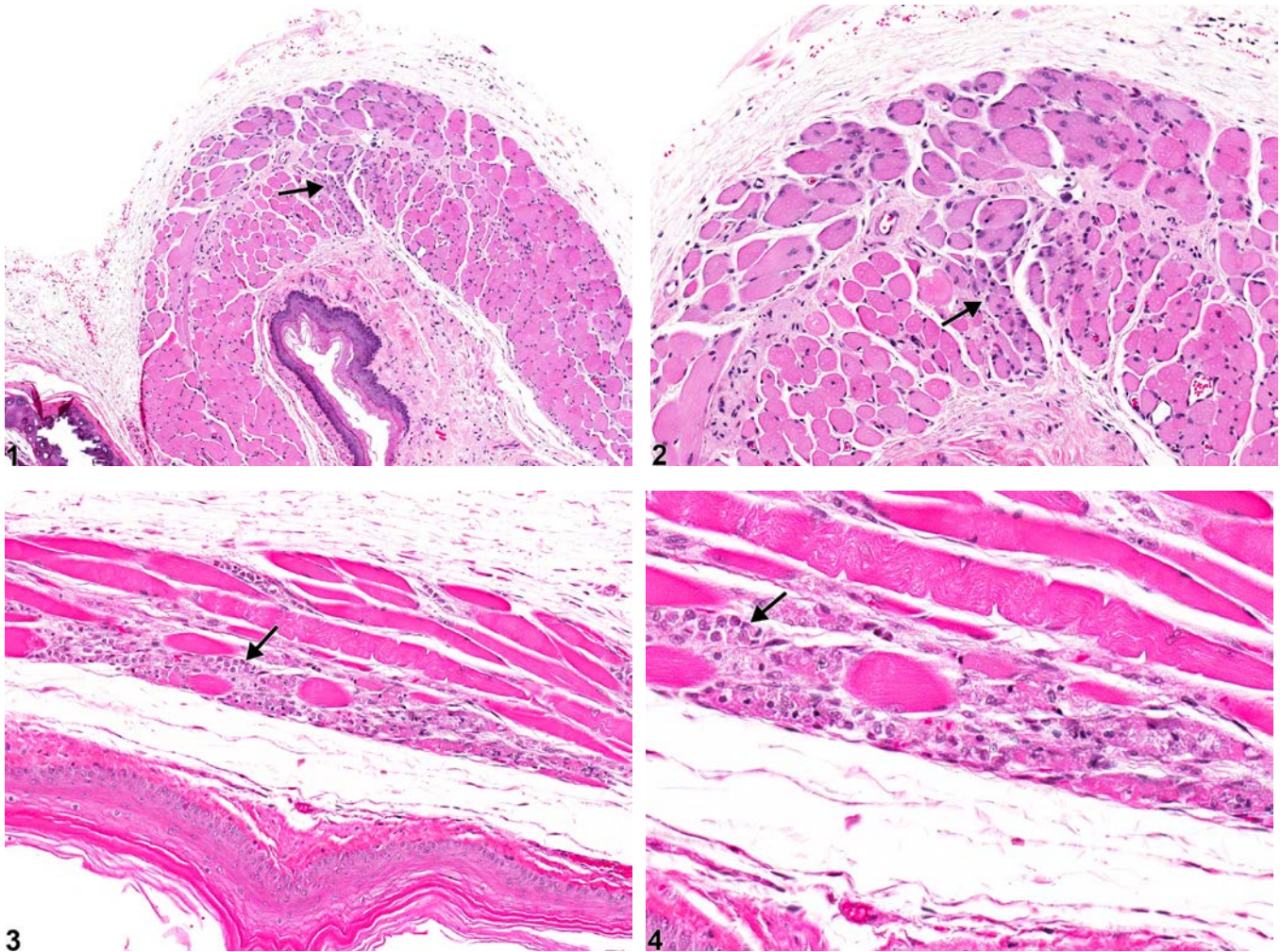


Figure Legend: **Figure 1** Esophagus, Muscularis - Degeneration in a male F344/N rat from a chronic study. Decreased muscle fiber size (arrow). **Figure 2** Esophagus, Muscularis - Degeneration in a male F344/N rat from a chronic study (higher magnification of Figure 1). Note the decreased muscle fiber size (arrow). **Figure 3** Esophagus, Muscularis - Degeneration in a female Sprague-Dawley rat from a chronic study. There are infiltrates of macrophages amid the muscle fibers (arrow). **Figure 4** Esophagus, Muscularis - Degeneration in a male F344/N rat from a chronic study (higher magnification of Figure 3). There are infiltrates of macrophages amid the muscle fibers (arrow).

Comment: Degeneration is characterized by decreased fiber size (Figure 1 and Figure 2), hypercontraction, “twisting and curling of fibers,” homogeneous eosinophilic to granular or floccular



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cytoplasm, loss of striations, and mineralization. Macrophages (Figure 3 and Figure 4) are frequently found in areas of muscle degeneration and necrosis. Gavage trauma can result in damage to the muscular wall of the esophagus, resulting in muscle degeneration and necrosis or perforation.

Recommendation: Whenever present, degeneration of the tunica muscularis should be diagnosed as “esophagus, muscularis - degeneration” and graded based upon the extent of the lesion. It should be noted in the narrative whether the pathologist considers this lesion to be due to chemical exposure or a gavage error.

References:

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