



NTP Nonneoplastic Lesion Atlas

Seminal Vesicle – Atrophy

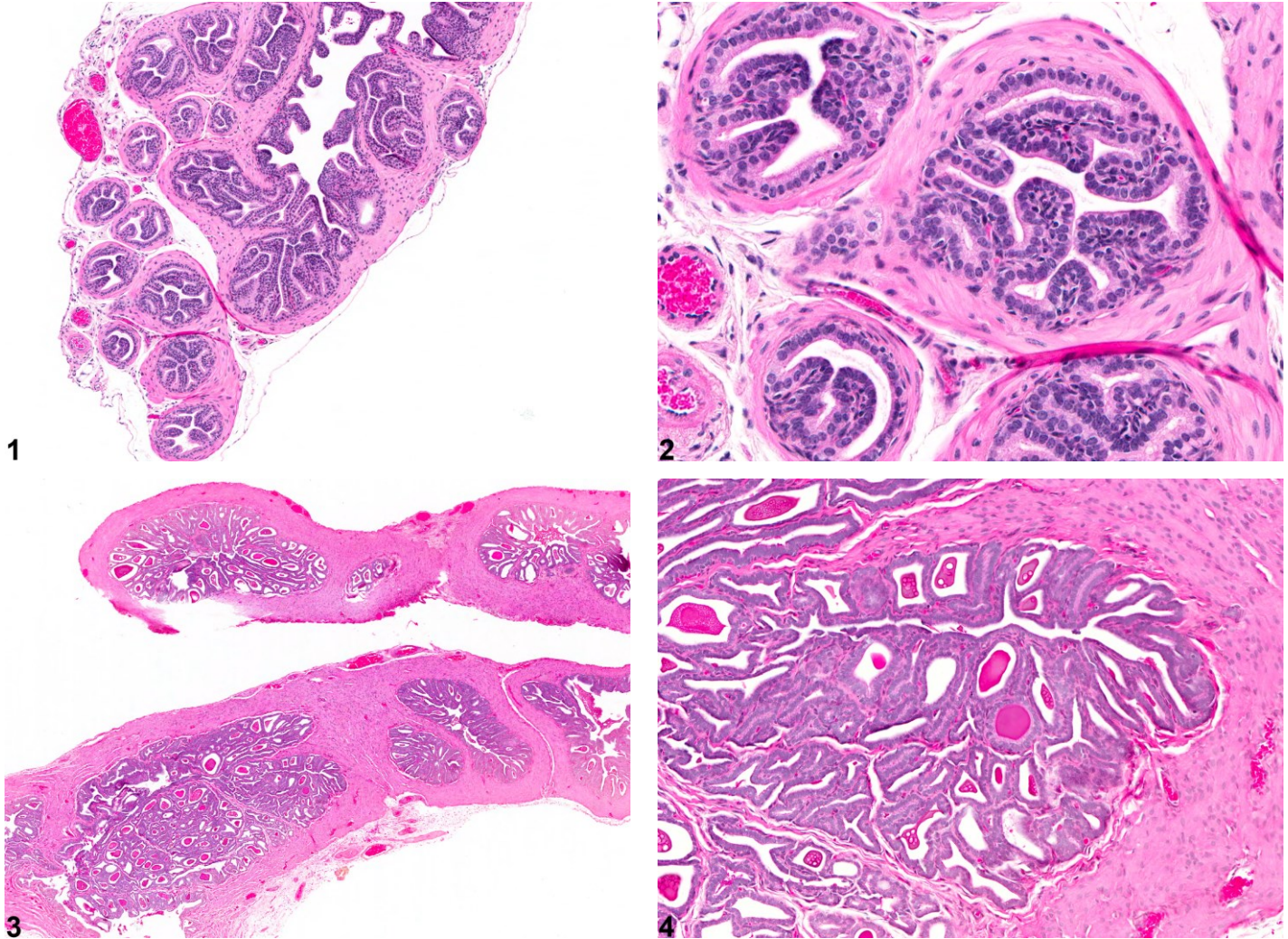


Figure Legend: **Figure 1** Seminal Vesicle - Atrophy. Atrophy of the seminal vesicle in a male B6C3F1 mouse from a subchronic study. **Figure 2** Seminal Vesicle - Atrophy. Higher magnification of Figure 1. Atrophy of the seminal vesicle in a male B6C3F1 mouse from a subchronic study. **Figure 3** Seminal Vesicle - Atrophy. Atrophy of the seminal vesicle in a male F344/N rat from a subchronic study. **Figure 4** Seminal Vesicle - Atrophy. Higher magnification of Figure 3. Atrophy of the seminal vesicle in a male F344/N rat from a subchronic study.

Comments: Seminal vesicle atrophy is characterized by a reduction in the size and number of glandular components and lining epithelial cells of the seminal vesicle. This is associated with secretory



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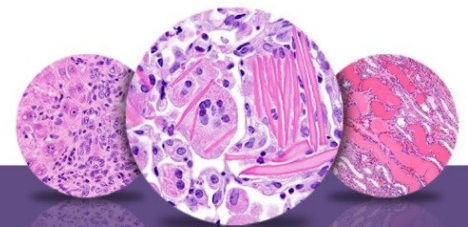
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depletion and an increased prominence of the contracted fibromuscular stroma. Atrophy may be accompanied by the formation of small papillary folds in the glands (Figure 1 and Figure 2). Alternatively, there may be collapse of the mucosa, with formation of glandular-appearing structures lined by cuboidal to low cuboidal epithelium (Figure 3 and Figure 4). Seminal vesicle atrophy may occur as an age-related change when the depletion of androgenic hormone has a profound atrophic effect on accessory sex organs, including the seminal vesicle. Estrogens decrease the volume of the glandular epithelium and increase the prominence of the fibromuscular stroma in the seminal vesicle. Treatment with anti-androgenic substances also leads to the atrophy of the seminal vesicle. Administration of doxorubicin in rats induces atrophic changes in several organs, including the seminal vesicle. Deficiency of the Egr family of zinc finger transcription factors like Egr4 and Egr1 as in *Egr4-Egr1* double-mutant mice leads to atrophy of seminal vesicle, prostate, epididymis, and testis.

Recommendation: Seminal vesicle atrophy should be diagnosed and graded. When present in both seminal vesicles, the diagnosis should be clarified as bilateral and severity based on the more severely affected seminal vesicle. Comments in the pathology narrative should address whether seminal vesicle atrophy is exacerbated by treatment and should identify related changes in other male reproductive tissues.

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