



NTP Nonneoplastic Lesion Atlas

Uterus – Dilation

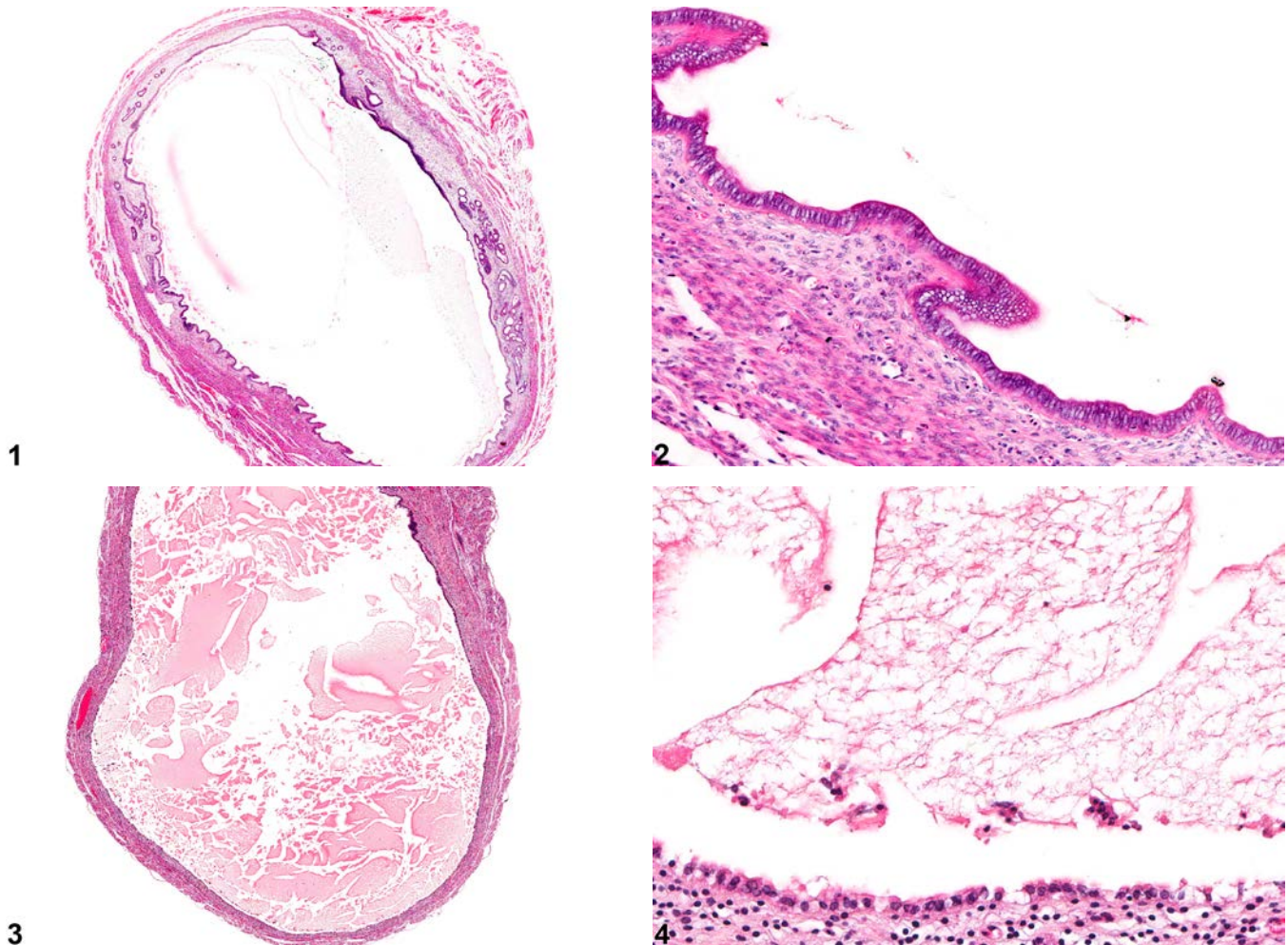


Figure Legend: **Figure 1** Uterus - Dilation of the uterine lumen in a female B6C3F1/N mouse from a chronic study. There is dilation of the uterine horn. **Figure 2** Uterus - Dilation in a female B6C3F1/N mouse from a chronic study (higher magnification of Figure 1). The endometrial epithelium is cuboidal. **Figure 3** Uterus - Dilation in a female B6C3F1/N mouse from a chronic study. There is dilation of the uterine lumen, which contains flocculent, eosinophilic material. **Figure 4** Uterus - Dilation in a female B6C3F1/N mouse from a chronic study (higher magnification of Figure 3). There is flattened epithelium and eosinophilic material in the uterine lumen.

Comment: Dilation of uterine horns (Figure 1, Figure 2, Figure 3, and Figure 4) is commonly observed at necropsy, and frequently these uteri have accumulations of excessive amounts of fluid within the



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lumen. Uterine dilation is relatively commonly seen in both rats and mice and may be segmental. Luminal dilation may be associated with stromal polyps or occur secondarily to hormonal imbalances from ovarian cysts or to a prolonged estrus state after cessation of the estrus cycle in aged rodents. Administration of progestins, estrogens, and tamoxifen in rats has been associated with uterine dilation. Luminal dilation is normally observed at proestrus and estrus in cycling rodents and should not be diagnosed. Increased serous fluid production is part of the proestrus phase of the cycle judged by the vaginal epithelium (which shows early keratinization covered by a layer of mucified cells) and should not be diagnosed.

With uterine dilation, the endometrial lining is usually attenuated or atrophic and the wall of the uterus thinned due to the increasing pressure, but in less severe cases the endometrium can be normal (Figure 2). Dilated uterine lumen that is secondary to an inflammatory process such as pyometra should not be diagnosed separately.

Uterine dilation may need to be differentiated from marked cystic endometrial hyperplasia, particularly when only cross-sections of the uterus are examined. In cystic endometrial hyperplasia, there is an increased number of active proliferating glands that may have dilated lumens. In uterine dilation, the uterine lumen is dilated, which could be confused with a single dilated glandular lumen. Therefore, the section must be carefully examined to determine whether the dilated structure is a single uterine gland or is the uterine lumen. The differentiation of these two lesions is more obvious in longitudinal sections of uterus.

Recommendation: Uterus - Dilation should be recorded and graded when not part of normal estrous cyclicity.

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