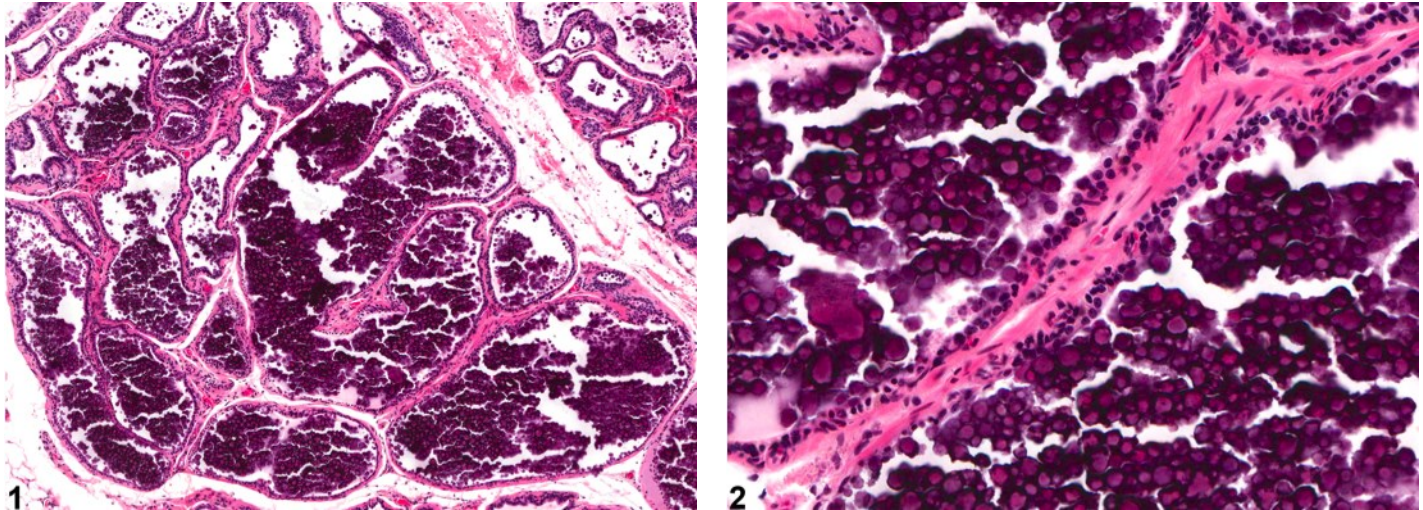




# NTP Nonneoplastic Lesion Atlas

## Prostate – Mineralization



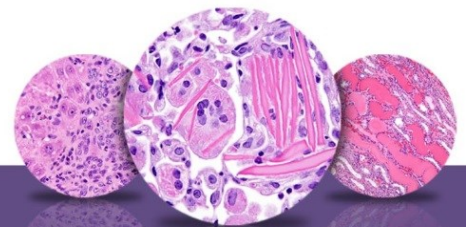
**Figure Legend:** **Figure 1** Prostate - Mineralization. Mineralization of the prostate in a male Osborne-Mendel rat from a chronic study. **Figure 2** Prostate - Mineralization. Higher magnification of Figure 1. Mineralization of the prostate in a male Osborne-Mendel rat from a chronic study.

**Comment:** Mineralization is characterized by focal to diffuse accumulation of basophilic, anisotropic, irregular granular material that may involve the glandular acini (Figure 1 and Figure 2) or vessel wall. This degree of mineralization is unusual. Two types of mineralization may occur: metastatic (calcification of normal tissue associated with high blood levels of calcium) or dystrophic (mineral deposits in abnormal or degenerating tissue not associated with increased blood levels of calcium).

**Recommendation:** Mineralization should be diagnosed during histopathologic evaluation of prostate and given a severity grade. The affected lobe(s) should be identified if possible and indicated in the tissue identification. If paired lobes are affected, the diagnosis should be indicated as bilateral and the degree of severity based on more severely affected lobe.

### References:

Boorman GA, Elwell MR, Mitsumori K. 1990. Male accessory sex glands, penis, and scrotum. In: Pathology of the Fischer Rat: Reference and Atlas (Boorman GA, Eustis SL, Elwell MR, Montgomery CA, MacKenzie WF, eds). Academic Press, San Diego, 419-428.  
Abstract: <http://www.ncbi.nlm.nih.gov/nlmcatalog/9002563>



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### References:

Bosland MC. 1992. Lesions in the male accessory glands and penis. In: Pathobiology of the Aging Rat, Vol 1 (Mohr U, Dungworth DL, Capen CC, eds). ILSI Press, Washington, DC, 443-467.

Abstract: <http://catalog.hathitrust.org/Record/008994685>

Greaves P. 2007. Male genital tract. In: Histopathology of Preclinical Toxicity Studies: Interpretation and Relevance in Drug Safety Evaluation. 3rd ed. Academic Press, San Diego, 661-716.

Abstract: <http://www.sciencedirect.com/science/book/9780444527714>

Mitsumori K. 1990. Blood and lymphatic vessels. In: Pathology of the Fischer Rat: Reference and Atlas (Boorman GA, Eustis SL, Elwell MR, Montgomery CA, MacKenzie WF, eds). Academic Press, San Diego, 473-484.

Abstract: <http://www.ncbi.nlm.nih.gov/nlmcatalog/9002563>

Suwa T, Nyska A, Peckham JC, Hailey JR, Mahler JF, Haseman JK, Maronpot RR. 2001. A retrospective analysis of background lesions and tissue accountability for male accessory sex organs in Fischer-344 rats. Toxicol Pathol 29(4):467-478.

Abstract: <http://www.ncbi.nlm.nih.gov/pubmed/11560252>

Suwa T, Nyska A, Haseman JK, Mahler JF, Maronpot RR. 2002. Spontaneous lesions in control B6C3F1 mice and recommended sectioning of male accessory sex organs. Toxicol Pathol 30(2):228-234.

Abstract: <http://www.ncbi.nlm.nih.gov/pubmed/11950166>

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