



NTP Nonneoplastic Lesion Atlas

Parathyroid Gland – Syncytial Giant Cell

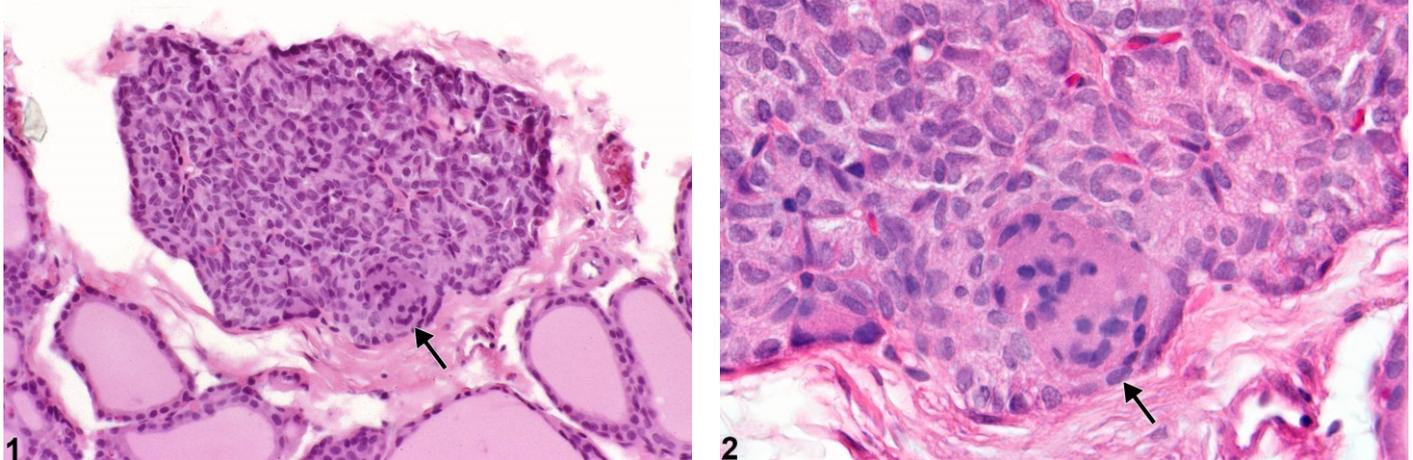


Figure Legend: **Figure 1** Parathyroid Gland - Syncytial giant cell in a male F344/N rat from a subchronic study. A syncytial cell formed by fusion of adjacent chief cells is recognized by multiple nuclei and eosinophilic cytoplasm (arrow). **Figure 2** Parathyroid Gland - Syncytial giant cell in a male F344/N rat from a subchronic study. Higher magnification of Figure 1 showing the multinucleated syncytial cell with eosinophilic cytoplasm formed by fusion of adjacent chief cells (arrow).

Comment: Multinucleated syncytial cells occur in the parathyroid of rats. Their number varies, but these giant cells may occupy up to one-half of the gland. They are formed by cytoplasmic fusion of adjacent chief cells. The cytoplasm may be densely eosinophilic. Syncytial giant cells are not believed to interfere with parathyroid function. There is no consensus that this is an antemortem change. Some scientists consider this a postmortem artifact.

Recommendation: Diagnosis of syncytial giant cell formation in the parathyroid is recommended. A severity grade is not needed. If both parathyroids are involved, the diagnosis should be qualified as bilateral.

References:

Capen CC, Rosol TJ. 1989. Recent advances in the structure and function of the parathyroid gland in animals and the effects of xenobiotics. *Toxicol Pathol* 17:333-345.
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