

NTP Nonneoplastic Lesion Atlas

Pancreatic Islet – Necrosis

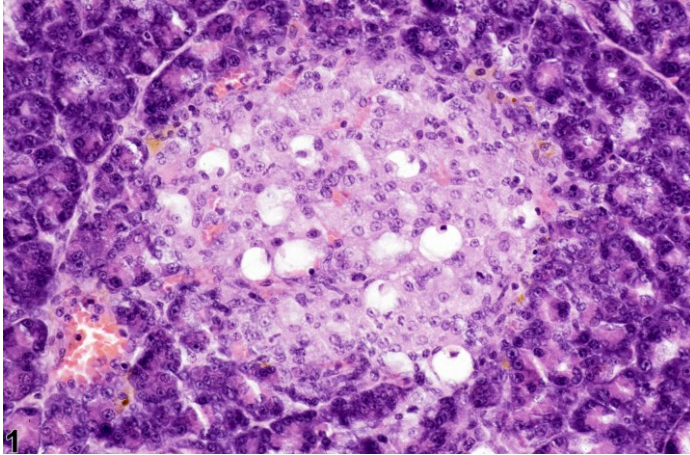


Figure Legend: Figure 1 Pancreatic islet - necrosis. Dropout of individual islet beta cells appears as clear vacuoles in a female F344/N rat from a chronic study.

Comments: Necrosis of beta cells in pancreatic islets has been associated with zinc deficiency and with xenobiotics that bind zinc. Affected beta cells are typically shrunken and hypereosinophilic with pyknotic nuclei. The loss of beta cells can leave empty vacuoles (Figure 1).

Recommendation: When present, this change should be diagnosed and graded. Severity grading is determined by the number of islets affected and the magnitude of the necrosis. Associated lesions, such as inflammation, should be diagnosed separately if warranted by severity.

References:

Haschek WM, Rousseaux CG, Wallig MA. 2010. Fundamentals of Toxicologic Pathology. Academic Press, New York, 251-259.

Abstract: <http://www.sciencedirect.com/science/book/9780123704696>

Riley MGI, Boorman GA, Hayashi Y. 1990. Endocrine pancreas. In: Pathology of the Fischer Rat: Reference and Atlas (Boorman GA, Eustis SL, Elwell MR, Montgomery CA, MacKenzie WF, eds). Academic Press, San Diego, 545-553.

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



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