



NTP Nonneoplastic Lesion Atlas

Skin – Hemorrhage

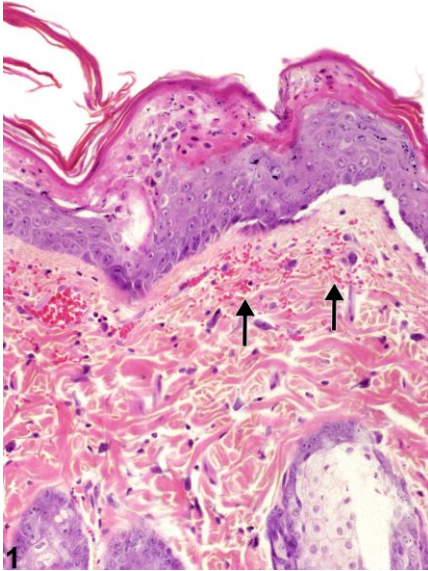
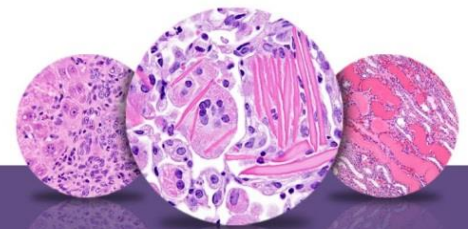


Figure Legend: Figure 1 Hemorrhage—extravasated erythrocytes within the dermis (arrows) in a male F344/N rat from a subchronic study.

Comment: Hemorrhage in the skin is characterized by clusters of extravascular erythrocytes (Figure 1). In toxicity and carcinogenicity studies, most spontaneously occurring hemorrhage in the skin is caused by vascular damage due to trauma secondary to fighting (when animals are housed together) or contact with rough edges of equipment. Hemorrhage also occurs as a component of test-article–related skin irritation or damage, often accompanying other lesions such as inflammation, necrosis, and ulceration. Hemorrhage may also be associated with proliferative vascular lesions, such as angiectasis or neoplasia.

Recommendation: In cases where hemorrhage is associated with a proliferative vascular lesion, it should not be recorded. If the hemorrhage is associated with another lesion, such as inflammation or ulceration, it need not be recorded unless the severity of the hemorrhage is excessive or is not commensurate with the severity of the associated lesions. However, it should be described in the pathology narrative. Whenever it is recorded, hemorrhage should be assigned a severity grade.



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