

NTP Nonneoplastic Lesion Atlas

Spleen – Angiectasis

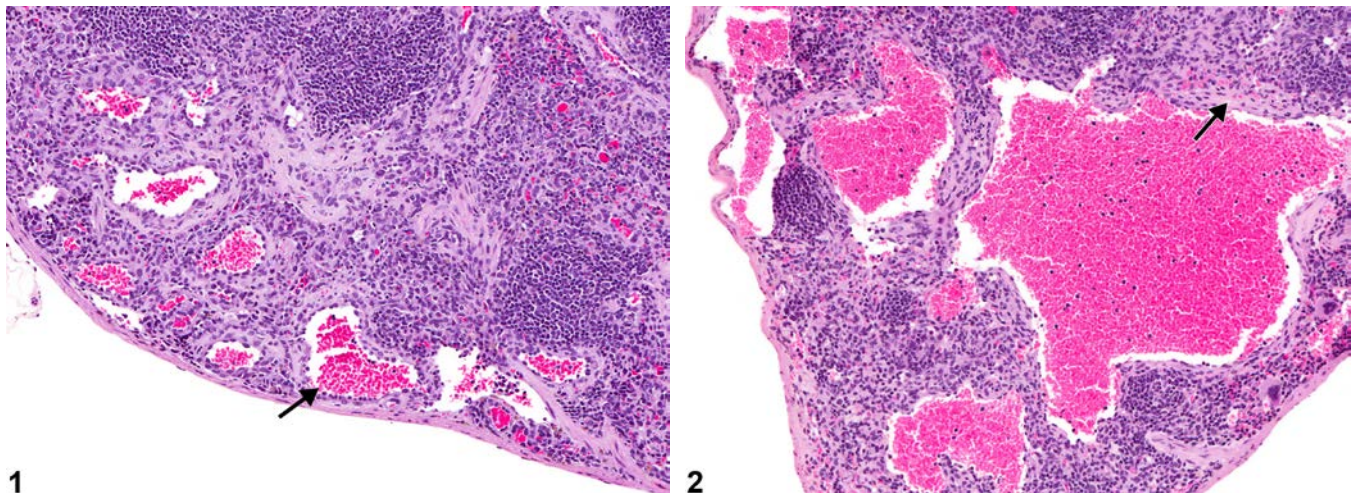


Figure Legend: **Figure 1** Spleen - Angiectasis in a female B6C3F1/N mouse from a chronic study. Multiple variably sized blood-filled spaces lined by endothelium (arrow) are present within the splenic parenchyma. **Figure 2** Spleen - Angiectasis in a female B6C3F1/N mouse from a chronic study. Angiectasis is associated with fibrosis (arrow) in the parenchyma of this spleen.

Comment: Angiectasis consists of variable-size blood-filled spaces within the splenic parenchyma, lined by delicate to inapparent endothelium (Figure 1, arrow). Angiectasis in the spleen is usually a focal lesion that may be associated with an area of fibrosis or scarring (Figure 2, arrow) and is more common in mice. Congestion is often seen with angiectasis. It should be distinguished from hemorrhage, hemangioma, and hemangiosarcoma. Angiectasis can be distinguished from hemorrhage by the presence of endothelial cells lining discrete blood-filled spaces in angiectasis. The distinction between angiectasis and hemangioma is not always obvious. Hemangiomas tend to be well-circumscribed, unencapsulated masses composed of tightly packed, dilated vascular spaces. Each vascular space is enclosed and lined by a single layer of normal-appearing endothelial cells aligned on collagenous septa, which are usually thin, although some have broad collagenous stroma. Angiectasis does not usually present as a well-circumscribed mass; the dilated vascular channels often course irregularly through the hematopoietic tissue. Furthermore, the dilated vascular channels of angiectasis are not invasive and do not demonstrate endothelial cell atypia, which differentiates this lesion from hemangiosarcoma. Previous terms for angiectasis include “hemangiectasis,” “hemangiectasia,” “vasodilation,” and “vasodilatation.”



NTP Nonneoplastic Lesion Atlas

Spleen – Angiectasis

Recommendation: Splenic angiectasis should be diagnosed and graded. If it is a component of or secondary to a neoplasm, then it should not be diagnosed but should be described in the pathology narrative.

References:

Elmore SA. 2006. Histopathology of the lymph nodes. *Toxicol Pathol* 34:425-454.

Full Text: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1892634/>

National Toxicology Program. 2010. NTP TR-556. Toxicology and Carcinogenesis Studies of Chromium Picolinate Monohydrate (CAS No. 27882-76-4) in F344/N Rats and B6C3F1 Mice (Feed Studies). NTP, Research Triangle Park, NC.

Abstract: <http://ntp.niehs.nih.gov/go/32608>

National Toxicology Program. 2011. NTP TR-570. Toxicology and Carcinogenesis Studies of α,β -Thujone (CAS No. 76231-76-0) in F344/N Rats and B6C3F1 Mice (Gavage Studies). NTP, Research Triangle Park, NC.

Abstract: <http://ntp.niehs.nih.gov/go/36137>

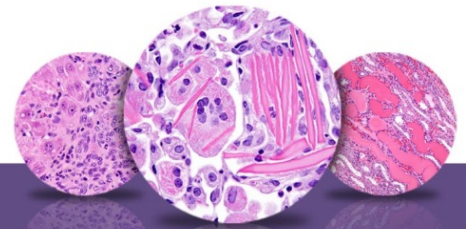
Stefanski SA, Elwell MR, Stromberg PC. 1990. Spleen, lymph nodes, and thymus. In: *Pathology of the Fischer Rat: Reference and Atlas* (Boorman GA, Eustis SL, Elwell MR, Montgomery CA, MacKenzie WF, eds). Academic Press, San Diego, 369-394.

Ward JM, Mann PC, Morishima H, Frith CH. 1999. Thymus, spleen, and lymph nodes. In: *Pathology of the Mouse* (Maronpot RR, ed). Cache River Press, Vienna, IL, 333-360.

Authors:

Kristen Hobbie, DVM, PhD
Principal Pathologist
Huntingdon Life Sciences
Peterborough, UK

Susan A. Elmore, MS, DVM, DACVP, DABT, FIATP
Staff Scientist, NTP Pathologist
NTP Pathology Group
National Toxicology Program
National Institute of Environmental Health Sciences
Research Triangle Park, NC



NTP Nonneoplastic Lesion Atlas

Spleen – Angiectasis

Authors:

Holly M. Kolenda-Roberts, DVM, PhD, DACVP
Veterinary Pathologist
SNBL USA
Everett, WA