Liver – Extramedullary Hematopoiesis

**Figure Legend:**  
**Figure 1** Extramedullary hematopoiesis—arrows indicate erythroid cells in a female Harlan Sprague-Dawley rat from a chronic study. **Figure 2** Extramedullary hematopoiesis—arrow indicates erythroid cells, and arrowhead indicates a megakaryocyte, in a female Harlan Sprague-Dawley rat from a chronic study. **Figure 3** Extramedullary hematopoiesis in a male B6C3F1 mouse from a chronic study. **Figure 4** Extramedullary hematopoiesis in a male B6C3F1 mouse from a chronic study.

**Comment:** Extramedullary hematopoiesis is unexpected in adult rodents and is typically associated with pathologic conditions. It is distinguished from inflammatory cell infiltrates by the presence of nucleated erythrocytes, immature granulocytes, and/or undifferentiated progenitor cells in the absence of associated hepatocellular necrosis. Clusters of erythroid cells are present in Figure 1 and Figure 2 (arrows). It is most often seen in animals treated with a toxicant.
and may be associated with hepatocellular degeneration, pigment deposition, and/or fatty change (Figure 2). A megakaryocyte is present in Figure 2 (arrowhead). Multiple perivascular cellular accumulations in Figure 3 and Figure 4 consist predominantly of developing granulocytes.

**Recommendation:** Whenever present, extramedullary hematopoiesis should be diagnosed and graded. Examination of bone marrow, lymph node, and spleen sections may show a correlation with extramedullary hematopoiesis in the liver. The types of cells involved (e.g., erythroid, granulocytic, mixed) should be indicated in the pathology narrative if they can be identified.

**References:**


Abstract: [http://www.cacheriverpress.com/books/pathmouse.htm](http://www.cacheriverpress.com/books/pathmouse.htm)

National Toxicology Program. 2010. NTP TR-558. Toxicology and Carcinogenesis Studies of 3,3',4,4'-Tetrachloroazobenzene (TCAB) (CAS No. 14047-09-7) in Harlan Sprague-Dawley Rats and B6C3F1 Mice (Gavage Studies). NTP, Research Triangle Park, NC.

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Full-Text: [http://tpx.sagepub.com/content/38/7_suppl/5S.full](http://tpx.sagepub.com/content/38/7_suppl/5S.full)
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