Eye, Sclera – Metaplasia, Osseous

Figure Legend:  
**Figure 1** Eye, Sclera - Metaplasia, Osseous in a male F344/N rat from a chronic study. There are two foci of focal osseous metaplasia (arrow) in the sclera. **Figure 2** Eye, Sclera - Metaplasia, Osseous in a male F344/N rat from a chronic study (higher magnification of Figure 1). This higher magnification image shows a discrete focus of well-differentiated, mineralized bone (osseous metaplasia) in greater detail.

Comment:  Osseous metaplasia of the sclera is an incidental aging change that occurs frequently in Fischer 344/N rats, less often in other common rat strains, and seldom if ever in mice. It consists of single to multiple, discrete foci of well-differentiated, mineralized bone. Occasionally, similar scleral foci of cartilage are observed (cartilaginous metaplasia). These innocuous structures do not incite pathologic changes in the sclera or adjacent tissues.

Recommendation:  Scleral osseous metaplasia should be diagnosed only if treatment related, but it does not need a severity grade (i.e., it should be recorded as “present”).

References:
National Toxicology Program. 2007. NTP TR-543. Toxicology and Carcinogenesis Studies of α-Methylstyrene (CAS No. 98-83-9) in F344/N Rats and B6C3F₁ Mice (Inhalation Studies). NTP, Research Triangle Park, NC.  
References:

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