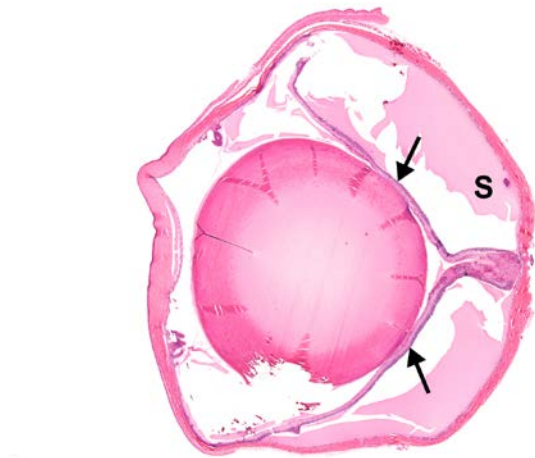


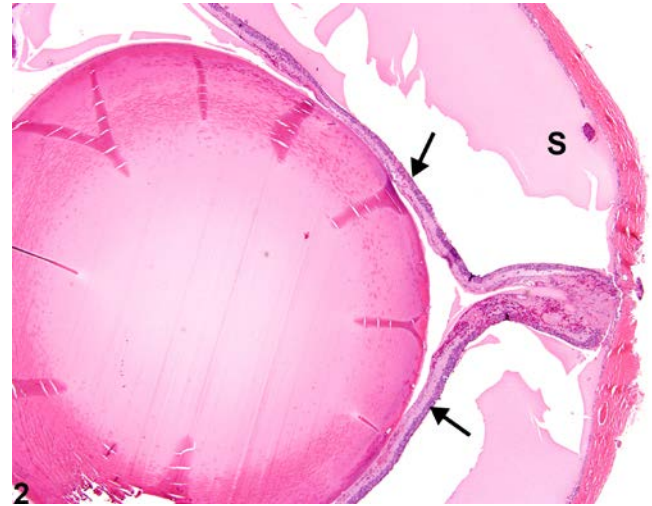


NTP Nonneoplastic Lesion Atlas

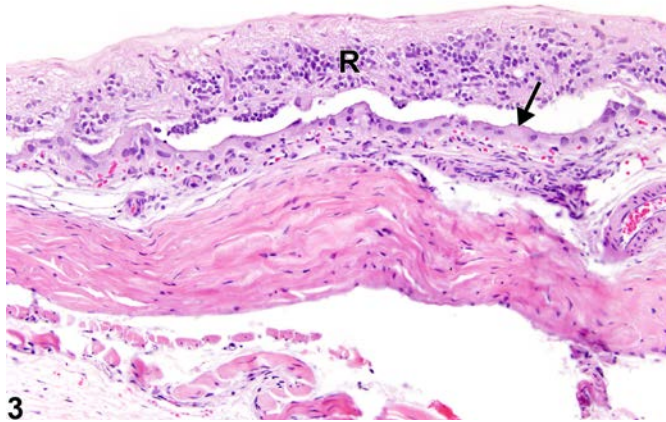
Eye, Retina – Detachment



1



2



3

Figure Legend: **Figure 1** Eye, Retina - Detachment in a female F344/N rat from a chronic study. The retina is detached from the posterior fundus, remaining attached only at the optic disc and the ora ciliaris retinae, resulting in the classic “Y-shaped” configuration, and there is proteinaceous fluid in the subretinal space (S). **Figure 2** Eye, Retina - Detachment in a female F344/N rat from a chronic study (higher magnification of Figure 1). There is proteinaceous fluid in the subretinal space (S) with complete disassociation of the retina (arrows) from the posterior fundus. **Figure 3** Eye, Retina - Detachment in a male F344/N rat from a chronic study. The retina (R) is detached and degenerate, and the retinal pigment epithelium (arrow) has undergone reactive hypertrophy and hyperplasia.



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Comment: Retinal detachment denotes pathologic expansion of the subretinal space, with partial to complete displacement of the retina from its normal association with the retinal pigment epithelium (RPE). Retinal detachment has many causes, including traumatic retinal tears or holes (rhegmatogenous detachment); traction by abnormal vitreal fibrous membranes; and space-occupying materials in the subretinal space, such as serous or inflammatory exudates, blood, or neoplastic cells. Retinal detachments can also result from any other factor that disrupts the normal intimate association of the RPE and the rod and cone photoreceptor processes, such as acquired or heritable retinal cell or RPE degenerations; metabolic diseases; and/or dysfunction of retinal or choroidal vasculature. Spontaneous detachments of uncertain etiology can also occur sporadically in rats and mice. True detachments must be distinguished from artifactual separation (which is a common postmortem occurrence). Features of true detachments can include fluid, hemorrhage, and/or inflammatory or neoplastic cells in the subretinal space, as well as secondary degeneration of the detached retina (especially the rod and cone photoreceptors) and reactive RPE hypertrophy and/or hyperplasia.

Complete retinal detachment can result in a classic cone or funnel shape that in microscopic cross section has a Y- or V-like configuration (Figure 1 and Figure 2). Large amounts of subretinal fluid may displace the detached and degenerate retina from the posterior fundus. The detached retina may be degenerate, and the RPE may exhibit hypertrophy and hyperplasia (Figure 2).

Recommendation: Retinal detachment should be diagnosed and assigned a severity grade. Associated lesions, such as hypertrophy and hyperplasia of the RPE, hemorrhage, or subretinal fluid accumulation, should not be diagnosed separately unless warranted by severity, but should be described in the pathology narrative. Associated lesions, such as inflammation, should be diagnosed separately.

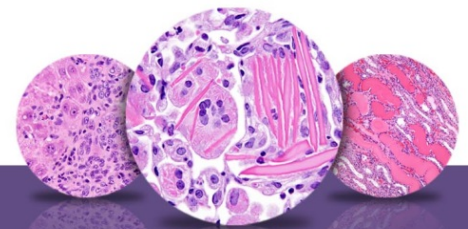
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Eye, Retina – Detachment

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