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Pelger Huet Anomaly

Pelger-Huet Anomaly (PHA) causes abnormalities in blood cells called granulocytes. PHA may be mistaken for infection or early stage leukemia. PHA testing is advised in apparent infections lacking other signs or when there is a possibility of leukemia.

The condition is inherited as an incomplete dominant. Dogs with only one gene are almost always healthy, but if bred to another carrying the mutation the pups that receive two copies of the PHA gene will be reabsorbed, stillborn or die shortly after birth. Occasionally a puppy will survive but have severe skeletal deformities and be susceptible to infection.

PHA is more a breeder's problem than an owner's as puppies with two copies of the PHA gene almost never survive and if they do have severe health issues. PHA causes small litters or loss of newborns.

The PHA gene has not yet been found but PHA status of breeding dogs can be determined by examination of a blood smear by a veterinary pathologist. Most PHA carriers have minor anomalies in some of their blood cells. However, not every PHA carrier will exhibit these anomalies so it is possible to receive false negative results from this test. Therefore any breeding dog with near relatives known to be PHA carriers should be tested. PHA carrier dogs should not be bred to each other. If a breeding dog has extremely variable litter sizes it may be a PHA carrier and should be screened.

Be sure anyone buying puppies from a PHA carrier is aware that the puppies may be carriers.