Differences with Greyhound's Blood Work

Greyhound blood work has enough differences from "other dog" blood work to sometimes make it deceivingly "normal" or "abnormal" if one isn't familiar with these differences. The salient differences are discussed below.

CBC = Complete Blood Count
RBC = Red Blood Cells
Hgb = Hemoglobin
PCV / HCT = Packed Cell Volume / Hematocrit
WBC = White Blood Cells
Platelets

NORMAL VALUES FOR:

	Greyhounds	Other Dogs
RBC:	7.4 – 9.0	5.5 – 8.5
Hgb:	19.0 – 21.5	12.0 – 18.0
PCV:	55 – 65	37 – 55

Greyhounds have significantly more red blood cells than other breeds. This elevates parameters for RBC, hemoglobin, and PCV / HCT, and is the reason greyhounds are so desirable as blood donors. Most veterinarians are aware of this difference. Never accept a diagnosis of polycythemia – a once-in-a-lifetime-rare diagnosis of pathologic red cell overproduction – in a greyhound.

Conversely, never interpret a greyhound PCV in the 30's – low 40's as being normal just because it is for other dogs. A greyhound with a PCV in the 30's – low 40's is an anemic greyhound. in Arizona, a greyhound PCV < 50 is a red flag to check for Ehrlichia.

	Greyhounds	Other Dogs
WBC:	3.5 – 6.5	6.0 – 17.0

Other greyhound CBC changes are less well known. The greyhound's normally low WBC has caused more than one healthy greyhound to undergo a bone marrow biopsy in search of "cancer" or some other cause of the "low WBC."

	Greyhounds	Other Dogs
Platelets:	80,000 – 200,000	150,000 – 400,000

Likewise, greyhound platelet numbers are lower on average than other breeds, which might be mistakenly interpreted as a problem. It is thought that greyhound WBCs, platelets, and total protein may be lower to physiologically "make room" in the bloodstream for the increased red cell load.

Confounding these normally low WBC and platelet numbers is the fact that Ehrlichia, a common blood parasite of greyhounds, can lower WBC and platelet counts. So if there is any doubt as to whether the WBC / platelet counts are normal, an Ehrlichia titer is always in order. The other classic changes with Ehrlichia are lowered PCV and elevated globulin and total protein. But bear in mind that every greyhound will not have every change, and Ehrlichia greyhounds can have normal CBCs.

Chem Panel

T.P. = Total Protein
Globulin
Creatinine
T4

	Greyhounds	Other Dogs
T.P.:	4.5 – 6.2	5.4 – 7.8
Globulin:	2.1 – 3.2	2.8 – 4.2

Greyhound total proteins tend to run on the low end of normal – T.P.s in the 5.0's and 6.0's are the norm. While the albumin fraction of T.P. is the same as other dogs, the globulin component is lower.

	Greyhounds	Other Dogs
Creatinine:	.8 – 1.6	.0 – 1.0

Greyhound creatinines run higher than other breeds as a function of their large lean muscle mass. A study at the Auburn University College of Veterinary Medicine found that 80% of retired greyhounds they sampled had creatinine values up to 1.6 times as high as the top of the standard reference range for "other dogs". As a lone finding, an "elevated creatinine" is not indicative of impending kidney failure. If the BUN and urinalysis are normal, so is the "elevated" creatinine.

	Greyhounds	Other Dogs
T4:	.5 – 3.6 (mean 1.47+/- .63)	1.52 – 3.60

These figures are from a University of Florida study of thyroid function in 221 greyhounds – 97 racers, 99 broods, and 25 studs – so it included both racers and "retired". While greyhound thyroid levels are a whole chapter unto themselves, a good rule of thumb is that greyhound T4's run about half that of other breeds.

Urinalysis

And lastly, the good news – greyhound urinalysis is the same as other breeds. It is normal for males to have small to moderate amounts of bilirubin in the urine.