



# Latin Comparative Pathology Group

## The Latin Subdivision of the CL Davis Foundation

### Diagnostic Exercise

Case #: 45 Month: June Year: 2014

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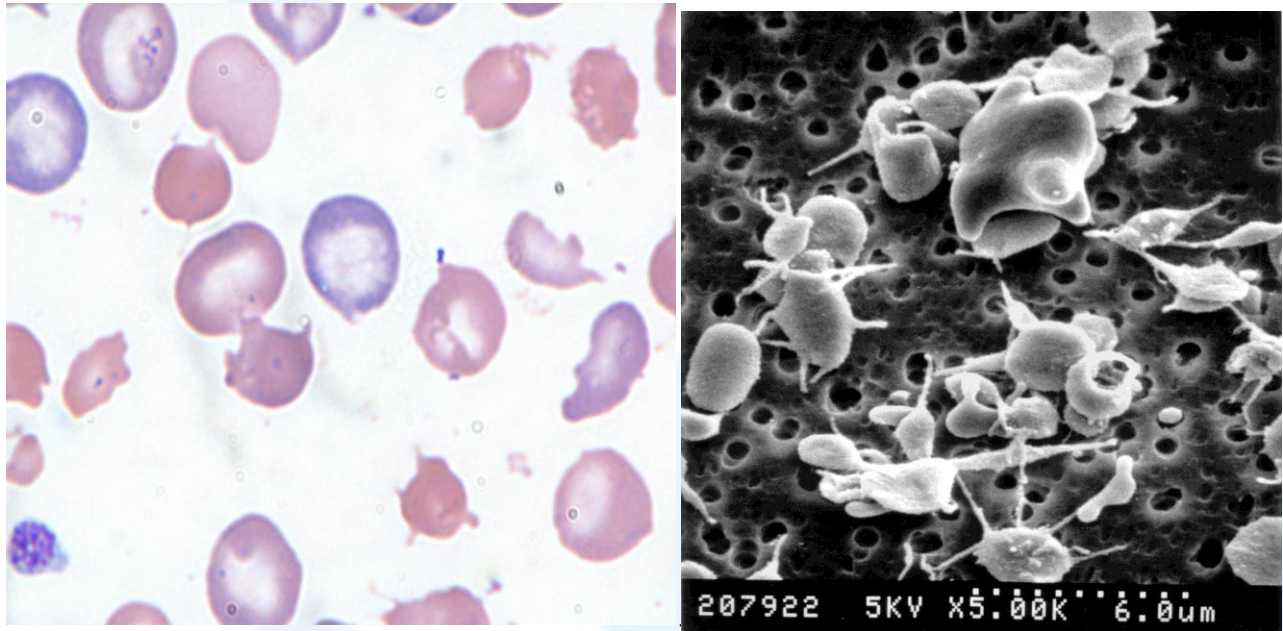
**Clinical History:** Sprague-Dawley rats enrolled in a toxicology study for a small molecule pharmaceutical. Clinical observations consisted of decreased food consumption and decreased body weight gain. Several rats were found dead prior to the conclusion of the study. Animals found dead were jaundiced and had abdominal distension; generally greater severity and incidence in females versus males.

**Laboratory Findings:**

Hematology (females)			Serum Chemistry (females)		
	Control mean	Dosed mean		Control mean	Dosed mean
Red blood cells (M/uL)	8.61	5.14	Cholesterol (mg/dL)	51.4	91.0
Reticulocytes (K/uL)	143.06	1157.46	Triglycerides (mg/dL)	196.2	21.6
Mean corpuscular volume (fL)	54.36	66.24	Bilirubin (mg/dL)	0.48	0.75
Mean corpuscular hemoglobin concentration (g/dL)	33.84	31.98			
Platelets (K/uL)	1189.6	628.1			
Mean platelet volume (fL)	5.12	7.73			

**Necropsy:** Massively enlarged spleens.

**Microscopic image:** Wright's stained Blood smear, 1000X (oil immersion) (left); scanning electron micrograph (right).



**Follow-up questions:** Please describe and interpret the clinical pathology data and describe the blood smear and scanning electron micrograph. Describe the expected microscopic findings in the spleen. Provide differential diagnoses considering all the provided data. What other data might be useful? What would you like to do next to determine the mechanism of these alterations?

Please send your comments/questions to the whole LCPG list by hitting "reply to all".

A final document containing this material with answers and a brief discussion will be posted on the C. L. Davis website by the end of the current month ([http://www.cldavis.org/lcpg\\_english.html](http://www.cldavis.org/lcpg_english.html)).