

File 1

Crystalluria in a dog

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A urine sample from a 7 year-old, uncastrated male German Shepherd Dog was submitted to our laboratory for a urinalysis and sediment examination. No clinical history was provided on the submission form.

The results of the urine examination are presented in Table 1 and the appearance of the urine sediment is shown in Figure 1 and 2.

Table 1: Urinalysis results

		Reference interval
Colour and transparency	medium-yellow, turbid	
Specific gravity	1.038	1.020-1.045
Dipstick:		
pH	7	6-7
WBC	Neg	Neg
Nitrite	Neg	Neg
Protein (SSA-Method)	Pos ++	Trace
Glucose	Neg	Neg
Ketones	Neg	Neg
Urobilinogen	Neg	Neg - Pos+
Bilirubin	Neg	Neg
RBC	Pos +++	Neg
Protein-creatinine ratio (UPC)	1.49	<0.5
Sediment:		
Quantity	Increased	
RBCs	Maximum 1/HPF	
Crystals	Large numbers	

HPF = 40x objective

LPF = 10x objective

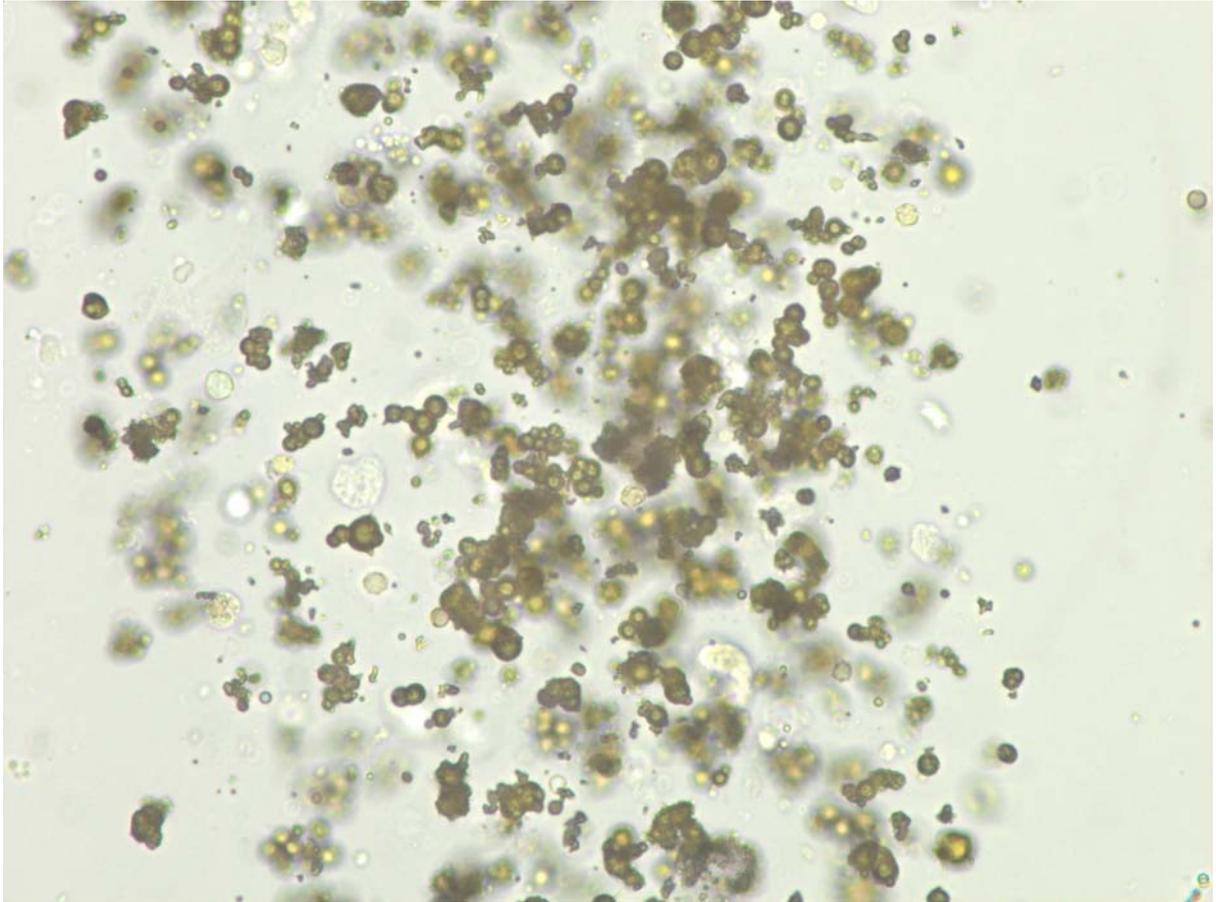


Figure 1: Urine sediment. Unstained, x10 Objective

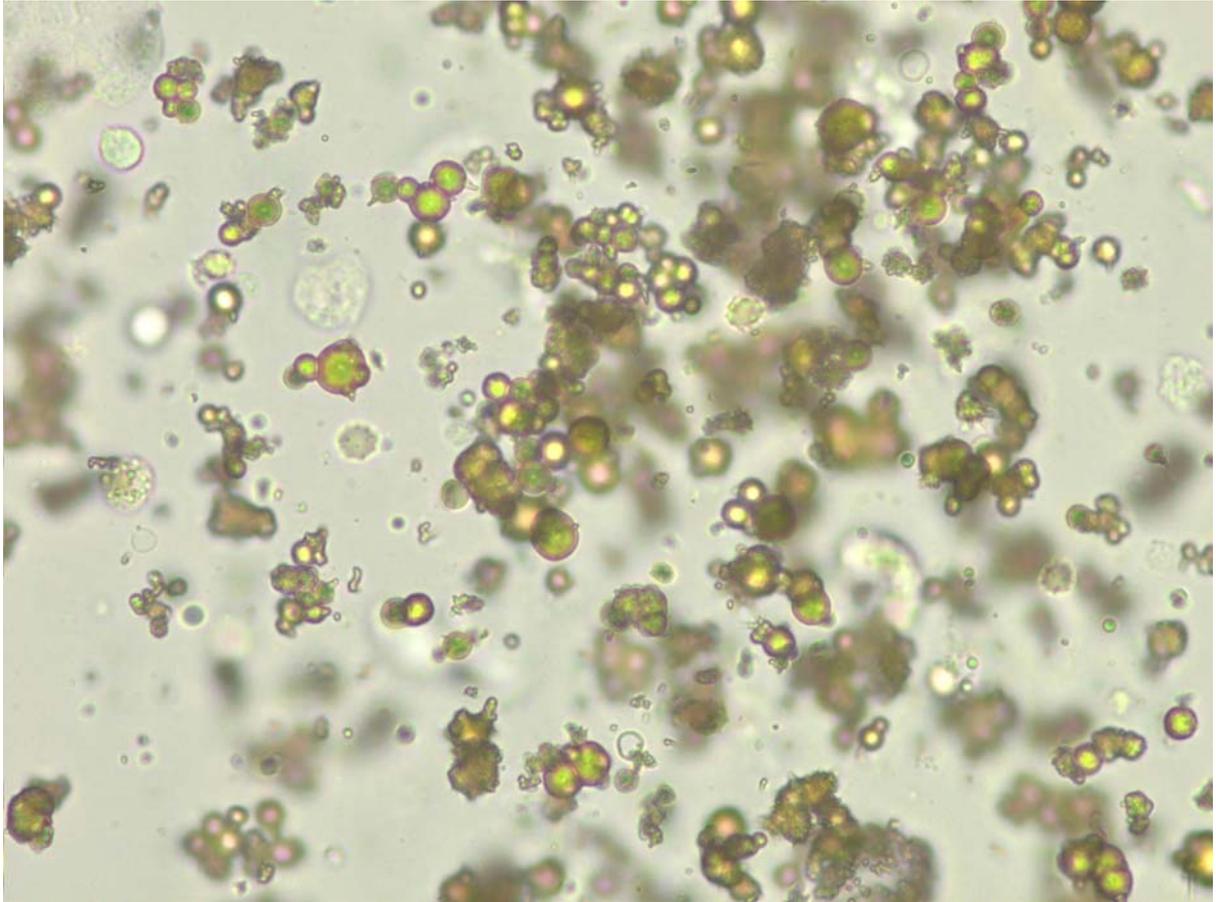


Figure 2: Urine sediment. Unstained, x40 Objective

Identify the crystals present in the sediment. What are the differential diagnoses?
Why/how do they arise?