

Patient: [REDACTED]
 DOB: [REDACTED] Age: [REDACTED] Gender: [REDACTED]
 Patient Identifiers: [REDACTED]
 Visit Number (FIN): [REDACTED]

Client: [REDACTED]
 Physician: [REDACTED]

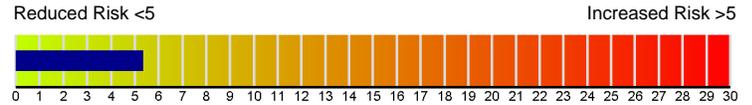
ARUP Test Code: 2008771
 Collection Date: 03/28/2016
 Received in lab: 03/30/2016
 Completion Date: 04/01/2016

Calculus

Calculated Risk Relative Supersaturation

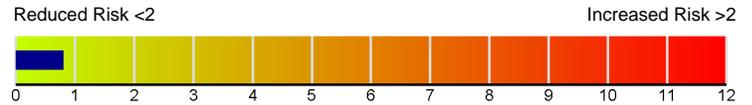
Calcium Oxalate

5.35



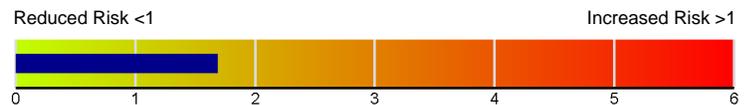
Calcium Hydrogen Phosphate

0.81



Uric Acid

1.69



Calculated risk is derived by a computer program that models the thermodynamics of calculi formation using measured urine components.

Component Results

Analyte	Result	Units	Reference Interval	Effect
Total Volume	2900	mL		Low urine volume (<1L/24h) promotes calculi formation.
pH	5.33		5.00-7.50	Acidic urine (pH<5.5) promotes precipitation of UrA. Alkaline urine (pH>7.2) promotes formation of CaHPO4 stones.
Calcium	438	mg/d		Hypercalciuria (>200 mg/d) promotes formation of CaOx and CaHPO4 stones.
Oxalate	41	mg/d	7-44	Hyperoxaluria (>40 mg/d) promotes formation of CaOx stones.
Phosphorus	2349	mg/d	400-1300	Forms insoluble complexes with calcium.
Sodium	281	mmol/d	51-286	Increased sodium promotes formation of CaOx and CaHPO4 stones.
Sulfate	61	mmol/d	6-30	Normal to high sulfate promotes precipitation of CaOx and CaHPO4 stones.
Urate	1079	mg/d	250-750	Hyperuricosuria (>600 mg/d) promotes formation of UrA stones.
Citrate	635	mg/d	320-1240	High citrate inhibits formation of CaOx and CaHPO4 stones.
Magnesium	136	mg/d	12-199	High magnesium inhibits formation of CaOx and CaHPO4 stones.
Potassium	87	mmol/d	25-125	Forms soluble complexes and inhibits stone formation.
Chloride	220	mmol/d	140-250	Forms soluble complexes and inhibits stone formation.
Creatinine	3219	mg/d	800-2100	Excretion provides a measure of completeness of 24h urine collection.



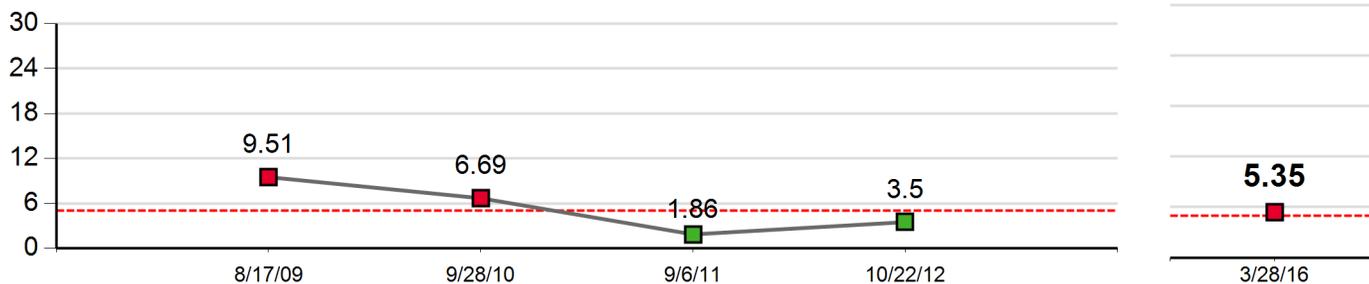
Patient: [REDACTED]
 ARUP Accession: 16-088-107926

Supersaturation Profile, Urine

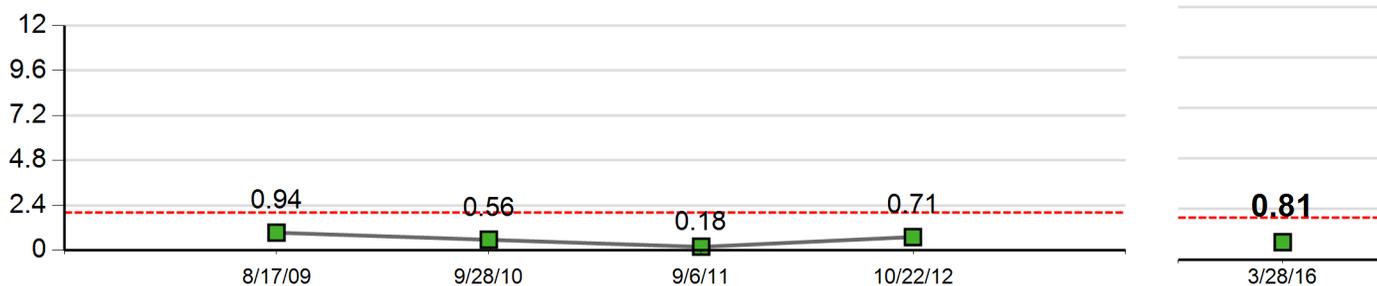
Patient: [REDACTED] | Date of Birth: [REDACTED] | Gender: [REDACTED] | Physician: [REDACTED]
 Patient Identifiers: [REDACTED] | Visit Number (FIN): [REDACTED]

Patient Historical Result Summary

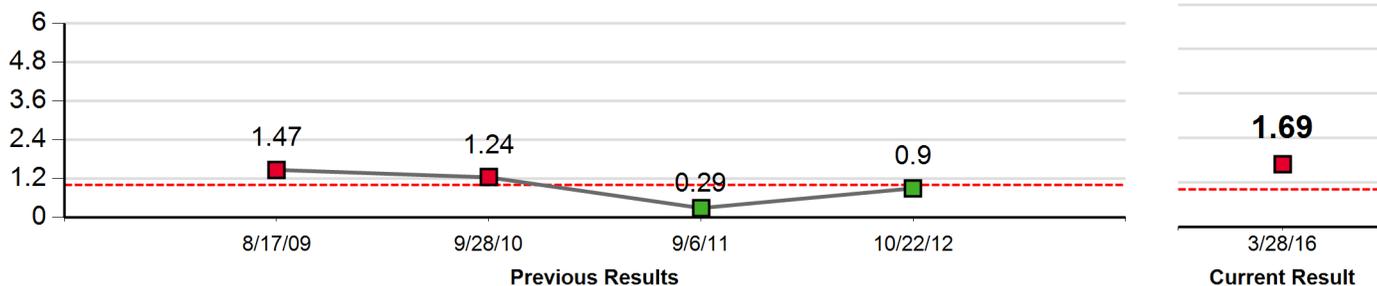
Calcium Oxalate



Calcium Hydrogen Phosphate



Uric Acid



Dashed line (---) = Results above this line indicate an increased risk for forming the particular calculi type.

Up to five consecutive test results are displayed on this chart; however, this result set may be incomplete due to variations in the demographic information submitted for prior tests. If the information shown on this chart appears incomplete, please consult this patient's prior charts.



Patient: [REDACTED]
 ARUP Accession: 16-088-107926

Supersaturation Profile, Urine

Patient: [REDACTED] | Date of Birth: [REDACTED] | Gender: [REDACTED] | Physician: [REDACTED]
Patient Identifiers: [REDACTED] | Visit Number (FIN): [REDACTED]

Interpretive Information

This test predicts formation of calcium oxalate, calcium hydrogen phosphate (brushite), and uric acid calculi using concentrations of analytes measured in a 24-hour urine specimen. Analyte concentrations are used in a calculation to predict formation of complexes that may exceed their solubility and crystallize as renal calculi. Development of renal calculi is related to increased urine concentrations of stone-forming substances such as calcium, oxalate, urate, cystine, and xanthine. Low urine volume enhances calculus formation. High concentrations of citrate and magnesium in the urine decrease the probability of stone formation.

This profile does not include testing for magnesium ammonium phosphate (struvite) or cystine calculi. If struvite stones associated with bacterial urinary tract infection are suspected, urinalysis and urine culture are recommended. If cystine calculi are suspected (calculi formation in relatively young individuals or family history of cystinuria), order Cystine Quantitative, Urine (ARUP test #0081106).

Test developed and characteristics determined by ARUP Laboratories. See Compliance Statement B: aruplab.com/CS

Software Reference

Marangella M, Petrarulo M, Daniele PG, Sammartano S. LithoRisk: a software for calculating and visualizing nephrolithiasis risk profiles. G Ital Nefrol 2002; 19(6):693-8.



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