

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

Client: [REDACTED]
 Physician: [REDACTED]

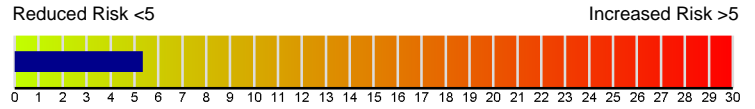
ARUP Test Code: 2008771
 Collection Date: 03/28/2016
 Received in lab: 03/30/2016
 Completion Date: 04/01/2016

Calculus

Calculated Risk Relative Supersaturation

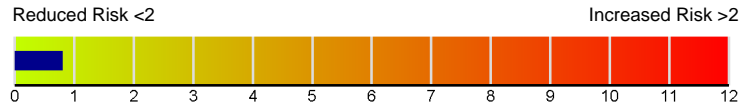
Calcium Oxalate

5.35



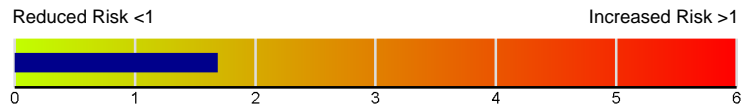
Calcium Hydrogen Phosphate

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. |



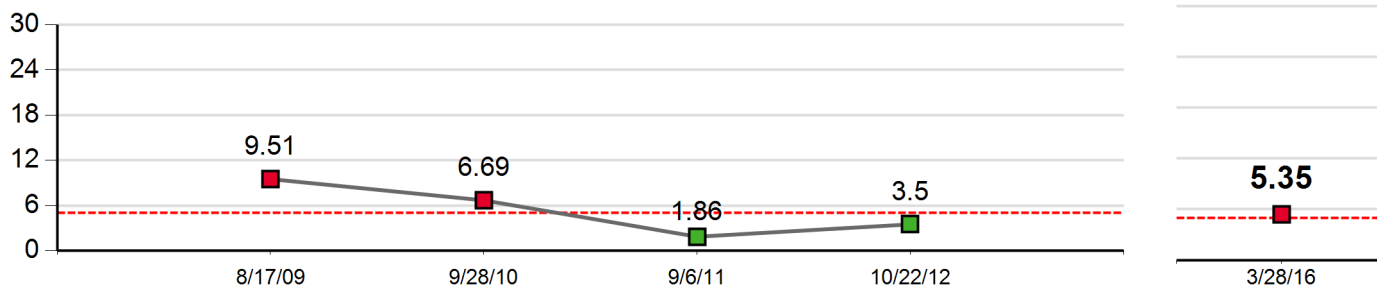
Patient: [REDACTED]
 ARUP Accession: 16-088-107926

Supersaturation Profile, Urine

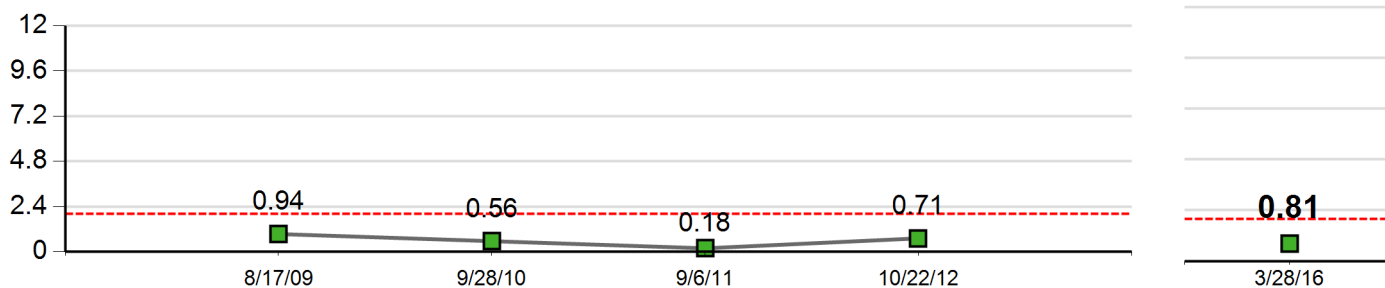
Patient: _____ | Date of Birth: _____ | Gender: _____ | Physician: _____
 Patient Identifiers: _____ | Visit Number (FIN): _____

Patient Historical Result Summary

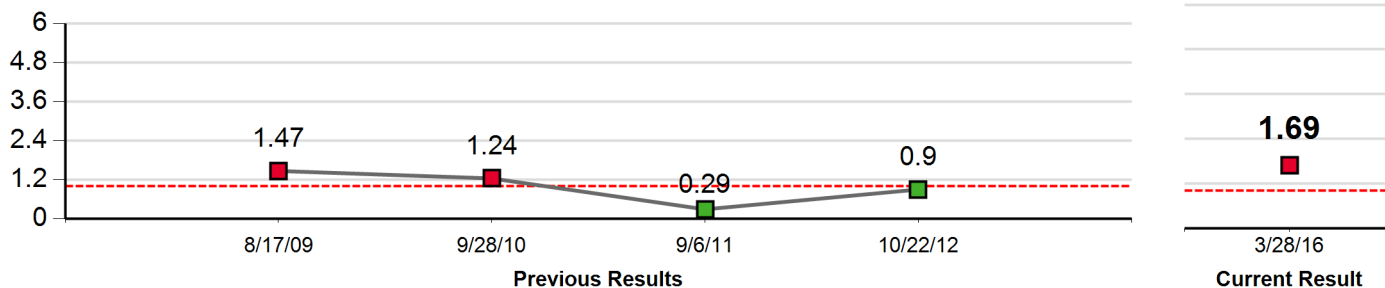
Calcium Oxalate



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: _____
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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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