

Patient Results Report

PATIENT

Sample, Patient

DATE OF BIRTH

06/15/1977

GENDER


M

PHYSICIAN

Quality, Assurance

Assurance Quality
 Research
 2250 West Campbell Park Drive
 Chicago, IL 60612

Current Test Overview

SAMPLE ID	RESULTS TURNAROUND (IN DAYS)	PATIENT COLLECTION DATE	LAB RECEIPT DATE	DATE COMPLETED	SAMPLE BARCODE
S16694029	0	11/07/2015	01/28/2016	01/28/2016	 S16694029

Litholink's computer generated comments are based upon the patient's most recent laboratory results without taking into account concurrent use of medication or dietary therapy. They are intended solely as a guide for the treating physician. Litholink does not have a doctor-patient relationship with the individuals for whom tests are ordered, nor does it have access to a complete medical history, which is required for both a definitive diagnosis and treatment plan. Cys 24, Cys Capacity, Sulfate, and Citrate were developed and their performance characteristics determined by Litholink Corporation. It has not been cleared or approved by the US Food and Drug Administration.



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Values larger, bolder and more towards red indicate increasing risk for kidney stone formation.

Summary Stone Risk Factors

SAMPLE ID: **S16694029**PATIENT COLLECTION DATE: **11/07/2015**

ANALYTE	← DECREASED RISK	INCREASING RISK FOR STONE FORMATION →
Urine Volume (liters/day)	● 2.61	
SS CaOx	● 5.48	
Urine Calcium (mg/day)		● 305
Urine Oxalate (mg/day)	● 37	
Urine Citrate (mg/day)	● 600	
SS CaP		● 1.41
24 Hour Urine pH		● 6.322
SS Uric Acid	● 0.36	
Urine Uric Acid (g/day)		● 0.903

Interpretation Of Laboratory Results

Urine calcium is high and has risen (average of last two was 198 and now is 305 mg/d). Our records do not show the use of calcium supplements, confirm clinically as calcium supplements can cause hypercalcaemia. Urine sodium, which matches dietary sodium closely, has risen (average of last two was 133 and now is 299 mmol/d). Increased dietary sodium can raise urine calcium. Our records do not report that thiazide has been prescribed. Before adding thiazide consider dietary change. Recheck at 6 weeks. If diet change is ineffective, consider use of thiazide. If prescribed recheck at 6 weeks. Monitor serum potassium as appropriate.

Urine pH has risen and is high to a borderline extent (average of last two was 5.802 and now is 6.322). Despite high urine pH, calcium phosphate stone risk is not elevated. High urine volume is protective and should be maintained.

Uric acid excretion has risen moderately from normal to mildly elevated (average of last two was 0.806 and now is 0.903 g/d). Protein intake is not high enough to explain the mild hyperuricosuria; PCR is less than 1.3 (1.3 g/kg/d) and urine sulfate excretion is less than 70 (40 meq/d). Consider unusual high purine food sources such as nuts and seed products. A medical nutritionist might be of help in this situation.

Calcium oxalate stone risk (SS CaOx) has fallen to borderline high (average of last two was 9.99 and now is 5.48). If stones are still active, further efforts at lowering supersaturation are warranted. In general, urine calcium, oxalate, citrate, and volume are the main factors responsible. The graphic display indicates which are most deviated from normal. Management suggestions are as noted above.



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Stone Risk Factors / Cystine Screening: Not Performed

DATE	SAMPLE ID	Vol 24	SS CaOx	Ca 24	Ox 24	Cit 24	SS CaP	pH	SS UA	UA 24
11/07/15	S16694029	2.61	5.48	305	37	600	1.41	6.322	0.36	0.903
08/15/15	S14276676	1.45	8.08	190	32	277	0.83	5.729	1.75	0.784
08/14/15	S16694027	1.32	11.90	205	41	308	1.24	5.874	1.57	0.828
REFERENCE RANGE		0.5 - 4L	6 - 10	male <250 female <200	20 - 40	male >450 female >550	0.5 - 2	5.8 - 6.2	0 - 1	male <0.800 female <0.750

Dietary Factors

DATE	SAMPLE ID	Na 24	K 24	Mg 24	P 24	Nh4 24	Cl 24	Sul 24	UUN 24	PCR
11/07/15	S16694029	299	73	70	1.109	29	287	40	13.08	1.3
08/15/15	S14276676	128	58	60	1.021	44	122	45	11.51	1.1
08/14/15	S16694027	138	52	69	0.923	36	133	40	10.59	1.1
REFERENCE RANGE		50 - 150	20 - 100	30 - 120	0.6 - 1.2	15 - 60	70 - 250	20 - 80	6 - 14	0.8 - 1.4

Normalized Values

DATE	SAMPLE ID	WEIGHT	Cr 24	Cr 24/Kg	Ca 24/Kg	Ca 24/Cr 24
11/07/15	S16694029	76.0	1824	24.0	4.0	167
08/15/15	S14276676	76.0	1789	23.5	2.5	106
08/14/15	S16694027	76.0	1748	23.0	2.7	117
REFERENCE RANGE				male 18-24 female 15-20	<4	<140



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Clinical Report


The clinical information shown below was obtained directly from your patient during our telephone interview, and, where possible, from medical records forwarded from your office.

Stone Morbidity	BEFORE TREATMENT	AFTER TREATMENT
First Stone Date:	08/01/2015	N/A
Total Stones:	0	0
Immediate Family Had Stones	Unknown	Unknown
Treatment Began:	N/A	09/15/2015

Dietary History	START	STOP

Medication History	START	STOP
DRUG (DOSE/DAY)		

Related Diseases	DIAGNOSED

 = Before Treatment

 = After Treatment


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Stone Risk Factors / Cystine Screening

ABBR.	ANALYTE	REFERENCE RANGE	COMMENTS
Vol 24	Urine Volume	0.5 - 4	L/d; Raise vol to at least 2L .
SS CaOx	Supersaturation CaOx	6 - 10	Raise urine vol and cit, lower ox and ca.
Ca 24	Urine Calcium	male <250, female <200	idiopathic hypercalciuria, consider hydrochlorothiazide 25 mg bid or chlorthalidone 12.5 - 25 mg qam, urine Na <100.
Ox 24	Urine Oxalate	20 - 40	usually dietary; if enteric, consider cholestyramine, oral calcium 1-2 gm with meals; if >80, may be primary hyperoxauria.
Cit 24	Urine Citrate	male >450, female >550	consider K citrate 20 - 30 mEq BID; if from RTA (urine pH > 6.5) also use K citrate.
SS CaP	Supersaturation CaP	0.5 - 2	Urine usually pH > 6.5, idiopathic hypercalciuria common.
pH	24 Hour Urine pH	5.8 - 6.2	<5.8 consider K or Na citrate 25-30 mEq BID; 6.5, RTA if citrate is low; >8, urea splitting infection.
SS UA	Supersaturation Uric Acid	0 - 1	Urine pH <6, creates UA stones. Treated with alkali.
UA 24	Urine Uric Acid	male <0.800, female <0.750;	g/d; dietary; if stones are severe and low protein diet fails try allopurinol 200 mg/d.

** Cystine Screening: positive result may be seen in patients with homozygous cystinuria and cystine stone disease, some individuals heterozygous for cystinuria without cystine stone disease, or in patients taking medications such as captopril or penicillamine.

Dietary Factors

ABBR.	ANALYTE	REFERENCE RANGE	COMMENTS
Na 24	Urine Sodium	mmol/d; 50 - 150	When high raises urine Ca, and K loss from thiazide; ideal is <100.
K 24	Urine Potassium	mmol/d; 20 - 100	<20, consider bowel disease, diuretics, laxatives.
Mg 24	Urine Magnesium	mg/d; 30 - 120	Low with poor nutrition, some laxatives, malabsorption syndrome.
P 24	Urine Phosphorus	g/d; 0.6 - 1.2	Low in bowel disease, malnutrition, high with large food intake.
Nh4 24	Urine Ammonium	mmol/d; 15 - 60	High + pH>7, urea splitting infection; low + pH <5.5, renal disease, UA stones, Gout.
Cl 24	Urine Chloride	mmol/d; 70 - 250	Varies with sodium and potassium intake.
Sul 24	Urine Sulfate	meq/d; 20 - 80	When high shows high protein diet.
UUN 24	Urine Urea Nitrogen	g/d; 6 - 14	This measures urea production from diet protein.
PCR	Protein Catabolic Rate	g/kg/d; 0.8 - 1.4	This measure protein intake per kg body weight.

Normalized Values

ABBR.	ANALYTE	COMMENTS
Weight	Body Weight in Kg	Obtained from treating physician or patient.
Cr 24	Urine Creatinine	mg/d; varies with body weight; check for day to day consistency of urine collection.
Cr 24/Kg	Creatinine/Kg	mg/kg/d; male 18 - 24, female 15 - 20; low in obesity, incomplete collections; high with opposite.
Ca 24/Kg	Calcium/Kg	mg/kg/d; <4.00; when high, treated as if mg/d were high (see previous page).
Ca 24/Cr 24	Calcium/Creatinine	mg/g; <140; when high, treated as if mg/d were high (see previous page).

