Patient Results Report

PATIENT	DATE OF BIRTH	GENDER	PHYSICIAN
Getsay, Tyler MRN: **06096681**	**09/20/1995**	**M**	**Kant, Kotagal Shashi**

Kotagal Shashi Kant MD
University of Cincinnati Medical Center
Department of Nephrology
7575 Wellness Way
Suite 211
West Chester, OH 45069

Current Test Overview

SAMPLE ID	RESULTS TURNAROUND (IN DAYS)	PATIENT COLLECTION DATE	LAB RECEIPT DATE	DATE COMPLETED	SAMPLE BARCODE
S25510641	**5**	**03/14/2018**	**03/15/2018**	**03/19/2018**	S25510641

Medical Director's Notes

Laboratory test values flagged with an asterisk (*) within this report refer to the following commentary from our physicians and quality assurance staff. Please feel free to call us at 800 338 4333 with questions you may have regarding this information.

SAMPLE ID	PATIENT COLLECTION DATE	ITEM	RELATED NOTES
S23913141	**02/10/2017**	**24 hr Phosphorus**	The urine P result was verified by repeat analysis.

John Asplin, MD
Medical Director

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The Kidney Stone Prevention Resource™

Mitchell S. Laks, Ph.D.
Laboratory Director
CLIA# 14D0897314

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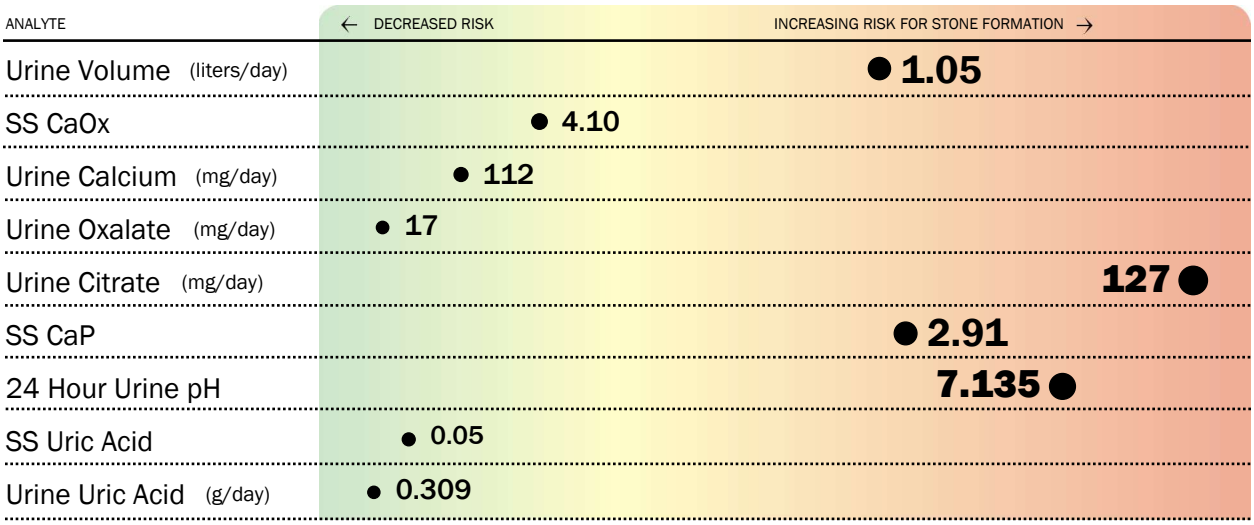
Values larger, bolder and more towards red indicate increasing risk for kidney stone formation.

Summary Stone Risk Factors

SAMPLE ID: **S25510641** PATIENT COLLECTION DATE: **03/14/2018**



Interpretation Of Laboratory Results

Note that in the following automated interpretation the current sample is compared to the sample collected on 02/10/2017 because the urine creatinine excretion varied between the current sample and the sample collected on 09/07/2017 by an excessive amount.

Urine volume has risen slightly but remains low (was 0.89 and now is 1.05 L/d). Low urine volume in a stone former should always be corrected if possible. A good clinical goal is 2.5 liters daily. Recheck in 6 weeks and adjust fluid intake as needed.

Urine citrate remains low. The patient reports that potassium citrate has been prescribed. Although potassium citrate is prescribed, the expected increase in urine potassium (average was 23 mmol/d and now is 35 mmol/d) and fall in urine ammonia (average was 19 mmol/d and now is 15 mmol/d) have not occurred. Confirm use and recheck. If being taken, increase the dose of potassium citrate. Monitor serum potassium if renal function impaired and repeat urine studies in 6 weeks. SS CaP is high. Even though urine citrate is low, potassium citrate may not be ideal unless SS CaP can be reduced by increasing urine volume or reducing urine calcium excretion, and stones contain no more than 15% calcium phosphate. Hypokalemia, urinary infection, bowel disease, and reduced kidney function are all possible causes of low urine citrate. If needed, hypokalemia can be repaired using potassium chloride to avoid further increase of urine pH. High protein intake is not a likely cause of the low urine citrate (PCR = 0.8 g/kg/d, sulfate = 22 meq/d).

Urine pH remains very elevated. Risk of calcium phosphate stones is elevated. The patient reports that alkali has been prescribed, this may have increased urine pH and calcium phosphate stone risk. Consider adjusting dosage if alkali is indeed being taken. Recheck in 6 weeks if dose is adjusted. Urine volume is low and increases calcium phosphate stone risk. Increased urine volume is clinically advisable.

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Calcium phosphate stone risk (SS CaP) is persistently high. In general, urine calcium, pH, 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: Negative (02/13/2017)

DATE	SAMPLE ID	Vol 24	SS CaOx	Ca 24	Ox 24	Cit 24	SS CaP	pH	SS UA	UA 24
03/14/18	S25510641	**1.05**	4.10	112	17	**127**	**2.91**	**7.135**	0.05	0.309
09/07/17	S25361310	**0.77**	**9.03**	113	23	**89**	**3.59**	**6.709**	0.21	0.354
02/10/17	S23913141	**0.89**	**8.73**	185	15	**99**	**3.11**	**6.989**	0.09	0.312
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
03/14/18	S25510641	142	35	83	0.654	15	121	22	5.08	0.8
09/07/17	S25361310	94	32	64	0.591	24	94	18	5.04	0.8
02/10/17	S23913141	68	**14**	85	**0.220***	14	73	7	3.56	**0.6**
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
03/14/18	S25510641	54.4	1095	20.1	2.1	103
09/07/17	S25361310	54.4	1316	24.2	2.1	86
02/10/17	S23913141	54.4	1185	21.8	3.4	**156**
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.

Dietary History

START	STOP

Medication History

DRUG (DOSE/DAY)	START	STOP
Potassium Citrate		

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).*

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