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
S25921101	6	09/19/2019	09/20/2019	09/25/2019	\$25921101

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

COLLECTION DATE

\$25921101 09/19/2019

24 hr Creatinine: As of 4/29/2018, the calibrator for urine creatinine has changed. Going forward, urine creatinine values will decrease by 17%. Reference ranges have been updated for Cr24/Kg, Ca24/Cr24, and Cit24/Cr24. Results from the last sample prior to the change in calibrator (collected on 03/14/2018) have been modified to assist in comparing data over time. The original Cr24 value was reported as 1095 and is recalculated as 909; Cr24/Kg was 20.1 and is recalculated as 16.7; and Ca24/Cr24 was 103 and is recalculated as 124.

\$25921101 09/19/2019

24 hr Creatinine: Note the excessive variation in creatinine excretion, suggesting a discrepancy in the collection process. The urine creatinine result was verified by repeat analysis.

S23913141 02/10/2017 24 hr Phosphorus: The urine P result was verified by repeat analysis.

John Asplin, MD Medical Director

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: \$25921101	PATIENT COLLECTION DATE:	09/19/2019
ANALYTE	← DECREASED RISK	Increasing risk for stone formation $ o $
Urine Volume (liters/day)		0.66 ●
SS CaOx		● 10.01
Urine Calcium (mg/day)	• 91	
Urine Oxalate (mg/day)	● 25	
Urine Citrate (mg/day)		129 ●
SS CaP		● 2.95
24 Hour Urine pH		7.435 ●
SS Uric Acid	• 0.04	
Urine Uric Acid (g/day)	• 0.340	

Interpretation Of Laboratory Results

Urine creatinine excretion has varied between the present sample and past sample(s) by greater than 20 percent. Given this degree of discrepancy our automated interpretive report may not be reliable and is therefore not presented. The creatinine (Cr24) values for the samples collected prior to 4/29/2018 had to be reduced by 17% to make the comparison valid due to a change in creatinine calibration (Cr24 collected on 3/14/2018 was reported as 1095 and recalculated to 909, and Cr24 collected on 9/7/2017 was reported as 1316 and recalculated to 1092).



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John R. Asplin, MD

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

Stone Risk Factors / Cystine Screening: Negative (02/13/2017)

DATE SAMPLE ID	Vol 24	SS CaOx	Ca 24	0x 24	Cit 24	SS CaP	рН	SS UA	UA 24
09/19/19 S25921101	0.66	10.01	91	25	129	2.95	7.435	0.04	0.340
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	CI 24	Sul 24	UUN 24	PCR
	9 S25921101	107	24	64	0.335	11	85	23	5.04	0.8
03/14/18	3 S25510641	142	35	83	0.654	15	121	22	5.08	0.8
09/07/17	7 S25361310	94	32	64	0.591	24	94	18	5.04	0.8
02/10/17	7 S23913141	68	14	85	0.220*	14	73	7	3.56	0.6
	NCE 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 SAMI	PLE ID	WEIGHT	Cr 24	Cr 24/Kg	Ca 24/Kg	Ca 24/Cr 24
09/19/19 \$259	21101	49.9	727 *	14.6	1.8	125
03/14/18 \$255		_	1095	20.1	2.1	103
09/07/17 \$253	61310	54.4	1316	24.2	2.1	86
02/10/17 \$239	13141	54.4	1185	21.8	3.4	156
REFERENCE RA				male 11.9-24.4 female 8.7-20.3	<4	male 34-196 female 51-262

The calibrator for urine creatinine changed on 4/29/2018. Shading and bolding have been removed from Cr24, Cr24/Kg, and Ca24/Cr24 on specimens collected prior to 4/29/2018. Going forward, urine creatinine values will decrease by 17%. All reference ranges are those in effect at the time of printing this report.

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= Before Treatment

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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

= 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.
0x 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.
рH	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.
CI 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 Urine 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 11.9 - 24.4, female 8.7 - 20.3; low in obesity or incomplete urine collection, high in people with large muscle mass or over-collection of urine.
Ca 24/Kg	Calcium/Kg	mg/kg/d; <4.00; when high, treated as if Ca 24 mg/d were high.
Ca 24/Cr 24	Calcium/Creatinine	mg/g; male 34-196, female 51-262; when high, treated as if Ca 24 mg/d were high.

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