US BioTek LABORATORIES · **PATIENT REPORT**
1620 Linden Av N Shoreline WA, 98133 • cservice@usbiotek.com • +1 206 365 1256

Clinical Laboratory Improvement Amendments

25092-0004

*** US BioTek** US BioTek. 16020 Linden Av N, Shoreline WA 98133

Lab ID 250940004
Patient ID P000062
Ext ID 25092-0004

Test Patient
Sex: Male • 55yrs • 01-Jan-70

RECEIVED
24-Jan-25

AdrenoInsight
Specimen type - Urine, Dried

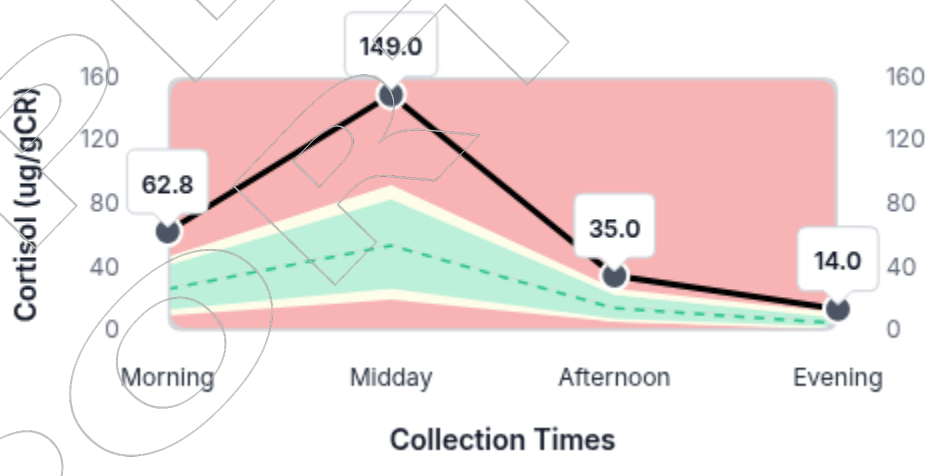
Collected
15-Jan-25 08.00am, 12.00pm, 04.00pm, 08.00pm

URINARY GLUCOCORTICOIDS

SERVICE	RESULT	H/L	REFERENCE	UNITS
Total Cortisol	36.30	H	(7.50-29.50)	ug/gCR
Total Cortisone	60.20	H	(13.50-43.00)	ug/gCR
Total Cortisol/Cortisone	0.60		(0.20-0.70)	ratio
Tetrahydrocortisol (THF)	294		(175-700)	ug/gCR
Tetrahydrocortisone (THE)	731		(330-1500)	ug/gCR

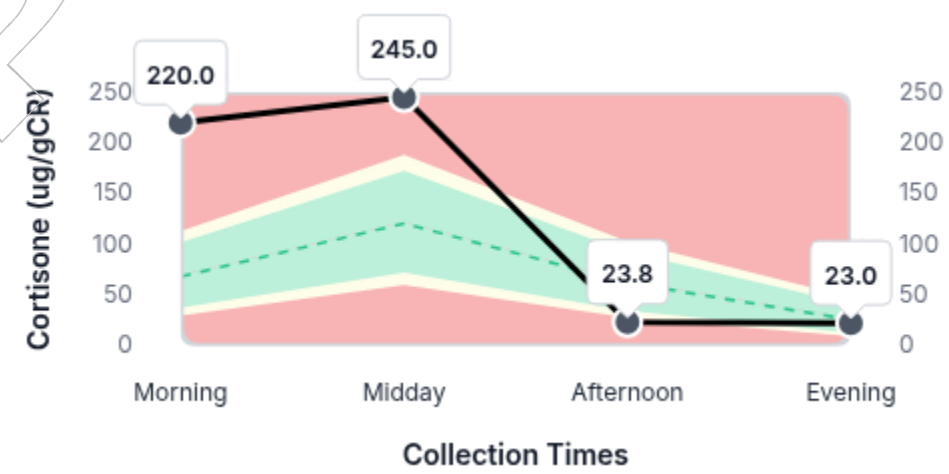
Free Cortisols

SERVICE	RESULT	H/L	REFERENCE	UNITS
Cortisol, Morning	62.80	H	(10.00-45.00)	ug/gCR
Cortisol, Midday	149.00	H	(20.00-90.00)	ug/gCR
Cortisol, Afternoon	35.00	H	(6.00-25.00)	ug/gCR
Cortisol, Evening	14.00	H	(2.00-10.00)	ug/gCR



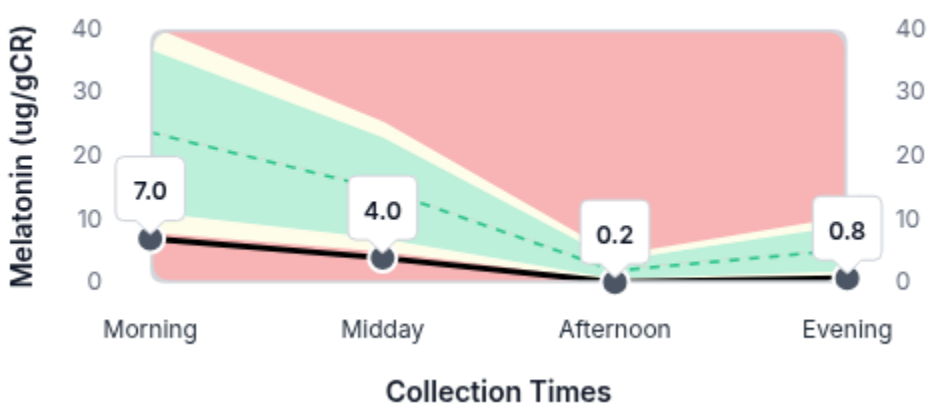
Free Cortisones

SERVICE	RESULT	H/L	REFERENCE	UNITS
Cortisone, Morning	220.00	H	(30.00-110.00)	ug/gCR
Cortisone, Midday	245.00	H	(60.00-185.00)	ug/gCR
Cortisone, Afternoon	23.80	L	(28.00-100.00)	ug/gCR
Cortisone, Evening	23.00		(10.00-45.00)	ug/gCR



URINARY DIURNAL MELATONINS

SERVICE	RESULT	H/L	REFERENCE	UNITS
Melatonin, Morning	7.00	L	(8.00-40.00)	ug/gCR
Melatonin, Midday	4.00	L	(5.00-25.00)	ug/gCR
Melatonin, Afternoon	0.20	L	(0.40-4.00)	ug/gCR
Melatonin, Evening	0.80	L	(1.00-10.00)	ug/gCR



Lab Director: Jillian Harrington, PhD, HCLD (ABB). CLIA#99D2282774

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KEY GLUCOCORTICOID RATIOS

SERVICE	RESULT	H/L	REFERENCE	UNITS
Total Cortisol/Cortisone	0.60		(0.20-0.70)	ratio
Metabolised Cortisol (THF + THE)	1025		(700-1700)	ug/gCR
11b-HSD-Index (THF/THE)	0.40	L	(0.59-1.42)	ug/gCR

URINE CREATININES

SERVICE	RESULT	H/L	REFERENCE	UNITS
Creatinine, Urine Pooled	1.20		(0.30-2.00)	mg/ml
Creatinine, Urine Morning	0.70		(0.30-2.20)	mg/ml
Creatinine, Urine Midday	0.60		(0.30-2.20)	mg/ml
Creatinine, Urine Afternoon	1.10		(0.30-2.20)	mg/ml
Creatinine, Urine Evening	1.70		(0.30-2.20)	mg/ml

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Symptom Categories

Estrogen & Progesterone Deficiency	66.67%
Estrogen Dominance/Progesterone Deficiency	66.67%
Low Androgens	52.22%
High Androgens	55.56%
Low Cortisol	58.73%
High Cortisol	47.37%
Hypometabolism	50.00%
Metabolic Syndrome	33.33%

Symptom Score

0. NONE	1. MILD	2. MODERATE	3. SEVERE
Rapid aging	Elevated triglycerides	Decreased flexibility	Cold body temperature
Headaches	Sensitivity to chemicals	Decreased libido	Decreased stamina
Rapid heartbeat	Nails breaking or brittle	Decreased urine flow	Bone loss
Depressed	Low blood sugar	Swelling or puffy eyes/face	Developmental delays
Decreased erections	Apathy	Oily skin or hair	Neck or back pain
High blood pressure	Anxious	Panic attacks	Slow pulse rate
Burned out feeling	Ringing in ears	Decreased muscle size	Autism Spectrum Disorder
Hair dry or brittle	Increased urinary urge	Sugar craving	Difficulty sleeping
Eating disorders	Hearing loss	Stress	Goiter
Weight gain - Waist	Acne	Thinning skin	Irritable
ADD/ADHD	Hot flashes	Mania	Prostate problems
	Decreased sweating	Infertility problems	
	Decreased mental sharpness	Nervous	
	Morning fatigue	Mental fatigue	
	Weight gain - Breasts/hips	Heart palpitations	
	High cholesterol	Low blood pressure	
	Constipation	Allergies	
	OCD	Hoarseness	
	Addictive behaviours	Night sweats	
	Dizzy spells	Evening fatigue	

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Urinary Glucocorticoids Comment

URINE CORTISOLS INTERPRETATION:

Elevated urinary cortisol levels at multiple time points throughout the day suggest hypercortisolism, reflecting chronic stress, adrenal hyperactivity, or conditions such as Cushing's syndrome or pseudo-Cushing's states (e.g., due to obesity, alcohol use, or severe stress). This state results in prolonged activation of the hypothalamic-pituitary-adrenal (HPA) axis, contributing to symptoms like anxiety, sleep disturbances, fatigue, abdominal weight gain, insulin resistance, hypertension, and immune suppression. Chronic hypercortisolism may also lead to muscle catabolism, bone loss, and impaired wound healing.

Management strategies include addressing underlying causes, such as evaluating for Cushing's syndrome through confirmatory tests (e.g., A salivary 4 point cortisol including a 12am sample). Nutritional support can help modulate cortisol levels, including adaptogenic herbs like ashwagandha and rhodiola, magnesium, vitamin C, and B vitamins. Anti-inflammatory and low-glycemic diets are beneficial, while minimising stimulants like caffeine. Stress management techniques and consistent sleep-wake cycles are important interventions.

Urine Melatonin Comment

URINE MELATONINS INTERPRETATION:

Consistently low or low-normal melatonin levels across all time points suggest potential circadian rhythm disruption or poor pineal gland function. This can be indicative of insufficient sleep quality or quantity, excessive exposure to artificial light (especially blue light from screens), or stress-related dysregulation. Symptoms may include difficulty falling asleep, poor sleep quality, or insomnia. Treatment strategies include improving sleep hygiene, minimising light exposure before bedtime, and promoting relaxation through dietary support such as magnesium or melatonin supplementation in the evening. Lifestyle changes such as reducing caffeine intake and managing stress levels are also beneficial. If melatonin supplementation is warranted, daily doses of 0.5 mg to 5 mg with 2mg being the most common dose shows similar effectiveness, although sleep onset may be quicker at the higher dose.

Methodology

Liquid Chromatography-Mass Spectrometry (LC-MS/MS/MS)