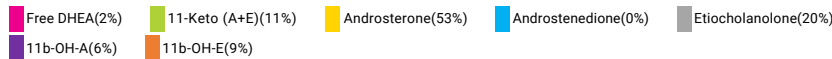
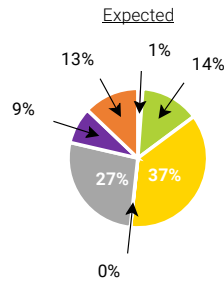
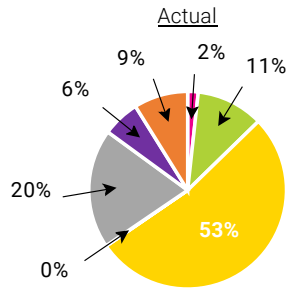


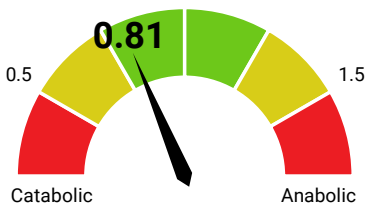
HPA-Axis Markers Continued

Total 17-Ketosteroids



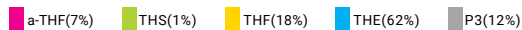
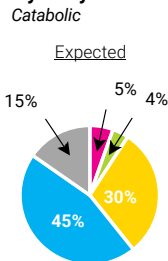
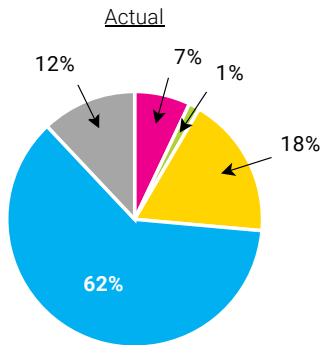
This patient's 17-ketosteroids are low. Decreases in 17-ketosteroids can be the result of low DHEA levels, hyperthyroidism, depressed adrenal function, kidney issues, hypopituitarism or decreased testicular function. 17-ketosteroids are formed during metabolism of androgenic sex hormones (specifically DHEA) and are released by the adrenal glands (M/F) and the testes (M). To examine the balance between the 17-ketosteroids, compare the "actual" chart on the left to the "expected" chart on the right representing the relative ratios of each. 17-ketosteroids should also be in balance with 17-hydroxysteroids to achieve optimal clinical results (see anabolic/catabolic ratio).

Anabolic/Catabolic Ratio



This patient is balanced between anabolic steroids and catabolic steroids, creating a bio-environment for cell proliferation and tissue health to perform at optimal levels while still allowing for detoxification and responses to stress. The optimal ratio is 1 (center). When results near the low end (more catabolic - left yellow zone) or the high end (more anabolic - right yellow zone) of the normal range, the anabolic/catabolic ratio is approaching an imbalance.

Total 17-Hydroxysteroids



The results indicate a normal level of catabolic (17-hydroxysteroid) metabolites. The proper balance between anabolic and catabolic metabolites is important; please review this balance by examining the anabolic/catabolic ratio.



Patient Result History

Analyte	Unit	2/1/2022 (0122-0000000)		
		Observation	Results	Reference Range
Creatinine	mg/dL		167.55	30 - 300
Estrogen and Progesterone Markers				
Alpha-Pregnanediol	ng/mg CR	Low	16.09	26 - 338
Alpha-Pregnanediol (w/ Oral Pg)	ng/mg CR	Low	16.09	257 - 2389
Beta-Pregnanediol	ng/mg CR	Low	141.99	201 - 1669
Beta-Pregnanediol (w/ Oral Pg)	ng/mg CR	Low	141.99	1600 - 12474
Alpha-Pregnanediol / Beta-Pregnanediol Ratio	Ratio		0.53	0.5 - 1.5
Total Estrogen Load	ng/mg CR		37.99	30 - 130
Estrone	ng/mg CR		4.35	1.7 - 8.5
Estradiol	ng/mg CR		1.12	0.8 - 3.3
Estriol	ng/mg CR		3.32	2.8 - 11.2
2-Hydroxyestrone	ng/mg CR		3.91	2 - 8.4
16a-Hydroxyestrone	ng/mg CR		0.24	<=1.43
4-Hydroxyestrone	ng/mg CR		0.62	<=1.2
E Quotient	Ratio	Low	0.61	>=1
2-Methoxyestrone	ng/mg CR	Low	2.4	3.1 - 15.8
2:16 Ratio (2-OHE1/16a-OHE1)	Ratio		16.29	>=4
Methylation Ratio	Ratio		61.38	>=60
Total Estrogen/Progesterone Ratio	Ratio	High	3.26	0.5 - 1.5
Total Estrogen/Progesterone Ratio (w/ Oral Pg)	Ratio	High	19.41	0.5 - 1.5
Androgen Markers				
Testosterone	ng/mg CR	Low	0.92	2.3 - 7.8
Dihydrotestosterone	ng/mg CR		0.73	<=3.2
Testosterone Metabolites	ng/mg CR		28.77	21.9 - 70.1
Testosterone/Metabolite Ratio	Ratio	Low	0.29	0.5 - 1.5
Androsterone	ng/mg CR		367.15	147 - 593
Etiocholanolone	ng/mg CR		136.13	120 - 421
5-alpha-Androstanediol	ng/mg CR	Below Detection Limit	-	2.8 - 14.2
5-beta-Androstanediol	ng/mg CR		28.04	14 - 54
Free DHEA	ng/mg CR		12.02	6.1 - 17.3
Average DHEA-S	ng/mg CR	High	689.54	38 - 507
DHEA Total	ng/mg CR		1205.29	649 - 1315
5a-Reductase Activity	Ratio	High	1.97	0.5 - 1.5
Androstenedione	ng/mg CR		0.45	0 - 1.2
HPA - Axis Markers				
Waking Cortisol	ng/mg CR		11.49	7 - 31
Mid-morning Cortisol	ng/mg CR		15.2	15 - 50
Afternoon Cortisol	ng/mg CR		19.96	8 - 25
Evening Cortisol	ng/mg CR		8.9	5 - 16
Bedtime Cortisol	ng/mg CR		5.84	1 - 10
Waking Cortisone	ng/mg CR		28.51	26 - 75
Mid-morning Cortisone	ng/mg CR	Low	33.61	45 - 128
Afternoon Cortisone	ng/mg CR		31.12	30 - 83
Evening Cortisone	ng/mg CR		23.61	20 - 60
Bedtime Cortisone	ng/mg CR		17.93	1 - 37
24-hour Cortisol	ng/mg 24hr CR		28.16	19 - 38
24-hour Cortisone	ng/mg 24hr CR	Low	33.64	39 - 74
Pregnanetriol	ng/mg CR		189.48	170 - 423
Allo-Tetrahydrocortisol	ng/mg CR		111.16	53 - 155
Tetrahydrodeoxycortisol	ng/mg CR	Low	21.77	46 - 106
Tetrahydrocortisone	ng/mg CR		970.89	564 - 1194
Tetrahydrocortisol	ng/mg CR	Low	283.8	369 - 795
11-Keto (Androsterone + Etiocholanolone)	ng/mg CR		76.53	62 - 213
11b-Hydroxyandrosterone	ng/mg CR		42.49	36 - 134
11b-Hydroxyetiocholanolone	ng/mg CR		61.73	57 - 202
Cortisol Metabolites	ng/mg CR		1365.85	1160 - 2183
Cortisol: Metabolite Ratio	Ratio		1.1	0.5 - 1.5



Analyte	Unit	2/1/2022 (0122-0000000)		
		Observation	Results	Reference Range
Total 17-Ketosteroids	ng/mg CR	Low	696.5	730 - 1522
Total 17-Hydroxysteroids	ng/mg CR		1577.1	1492 - 2637
Anabolic/Catabolic Ratio	Ratio		0.81	0.5 - 1.5
Cortisol/Cortione 11B-HSD II	Ratio	High	1.65	0.4 - 1.2

