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Accession #: Patient Name:

Date of Birth: Gender:

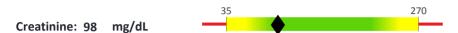
Collected: Received: Reported:

Tech:

Test: 4990 Doctor ID:

> Phone: Fax:

# **CompletePlus Hormone Profile (Dried Urine)**



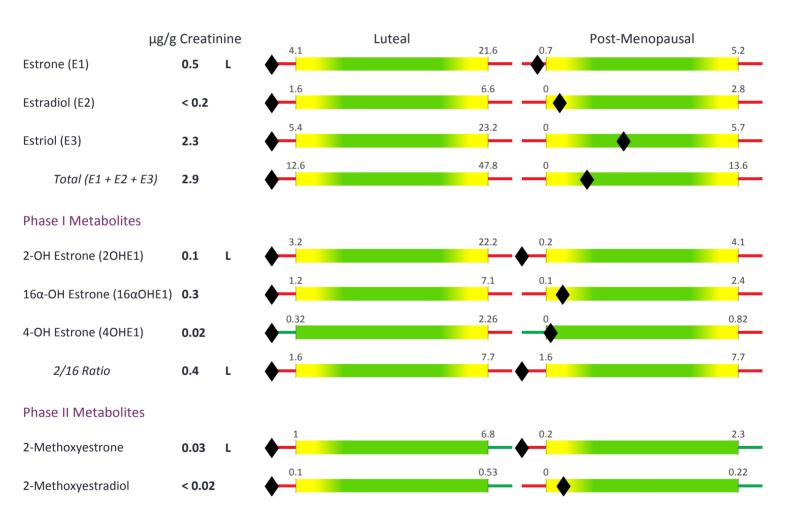
Comments:

### **Estrogens**

### Reference Ranges

Postmenopausal women on hormones, or cycling women collecting during the luteal phase, refer to the luteal reference range.

Postmenopausal women not taking hormones, refer to the postmenopausal reference range





Mid-Cycle

Estrone 2.0-39 11.0-46

Estradiol 1.0-23 4.0-45

Estriol 3.0-48 20-130

Estrogen Total 7.0-110 38-221

Pregnanediol 0-2500 N/A



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#### **Estrogen Ratios**



Estrogen Quotient: 3.8

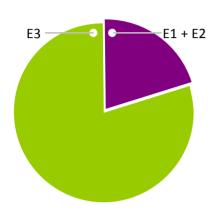
E3/(E1+E2)

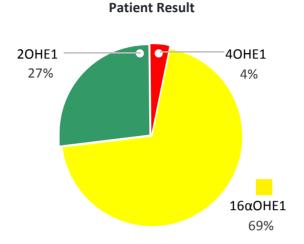
**Patient Result** 



Methylation Ratio: 0.28 2-Methoxyestrone/20HE1

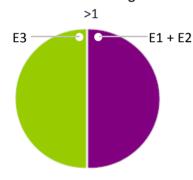
**Patient Result** 



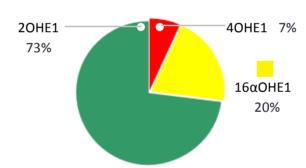




### Reference Range



#### **Reference Range**



# Reference Range





Patients with an EQ>1 have a higher survival rate after breast cancer, and may be at decreased risk for developing breast cancer. EQ often declines as women enter menopause.

2-OHE1, a Phase I liver metabolite of estrone, is considered protective.  $16\alpha$ -OHE1 is a Phase I metabolite of estrone that has some duality: it is potentially carcinogenic and it is important for building bone. Therefore, very high levels and very low levels are both undesireable. High levels suggest a need for measures to improve estrogen detoxification. Low levels may increase risk of osteopenia.

4-OHE1 is a highly carcinogenic Phase I metabolite. Low levels are desireable.

A comparison of 2-Methoxyestrone with 20HE1 allows insight into methylation pathways. If the methylation ratio is on the low end of the reference range, consider adding supplements to improve methylation. If needed, consider further testing for methylation defects.

#### **Progesterone**





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#### **Enzyme Activity Phenotype Assessment**



Elevated  $5\alpha$ -reductase activity is associated with Polycystic Ovarian Syndrome (PCOS) and hirsutism in women, Benign Prostatic Hyperplasia (BPH) and premature baldness in men, and obesity and insulin resistance in both genders. Low  $5\alpha$ -reductase activity may result in reduced conversion of testosterone to DHT and undervirilization in males.

#### 11β-HSD II (11β-hydroxysteroid dehydrogenase II)

Cortisol/Cortisone Ratio (116-HSD II) 0.77



 $11\beta$ -HSD II is predominantly a renal enzyme. It inactivates cortisol in order to prevent competitive binding to mineralocorticoid receptors. Its activity can be measured by the ratio of cortisol/cortisone. An elevated ratio (toward right on the graph) indicates suppressed enzyme activity, and may be clinically related to stress, hypertension, high dose licorice, cortisol administration, or insulin resistance.

### **Other Analytes** Melatonin μg/g Creatinine Reference Range 17.7 6-Sulfatoxymelatonin (1st Morning) 62.2 **Thyroid** μg/g Creatinine Reference Range Free T3 339 341 1524 Free T4 630 mg/g Creatinine Reference Range 0.6 Kynurenic 0.93 Xanthurenic 0.33



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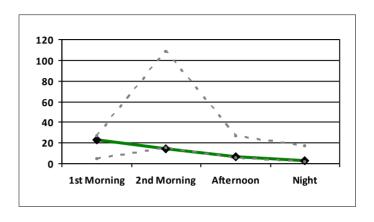
Patient Name:

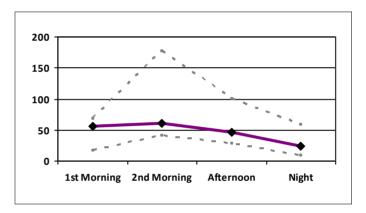
### **4-Point Cortisol and Cortisone**

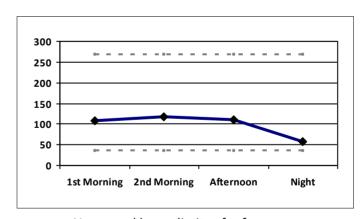
Cortisol	μg/g	Range
1st Morning	23.1	4.4 - 26.9
2nd Morning	14.6 L	15.5 - 108
Afternoon	7.1	6.2 - 26.7
Night	3.1	1.8 - 17.7

Cortisone	μg/g	Range
1st Morning	55.9	18.2 - 69.3
2nd Morning	61.3	41 - 177.1
Afternoon	45.7	28.4 - 101.3
Night	23.3	10.3 - 58.8

Creatinine	mg/dL	Range
1st Morning	108	35 - 270
2nd Morning	117	35 - 270
Afternoon	110	35 - 270
Night	58	35 - 270







----- Upper and lower limits of reference range.

