

POLYCYSTIC OVARY SYNDROME (PCOS)

A. OVERVIEW IN MODERN BIOMEDICINE

1. Chronic anovulation

- a. Caused by inappropriate estrogen feedback to the hypothalamus-pituitary system

2. Characteristics

- a. Bilateral polycystic ovaries
- b. Various menstrual disorders
 1. Amenorrhea
 2. Oligomenorrhea (infrequent periods)
 3. Dysfunctional uterine bleeding
- c. Infertility
- d. Obesity
- e. Rarely, endometrial carcinoma

3. Treatment with Western medicine

- a. Clomiphene (Clomid)
- b. Surgery not recommended
 1. Can lead to adhesions

B. Traditional Chinese Medicine

1. Etiology

- a. Kidney *yang* deficiency
 1. Excess water accumulates and congeals into phlegm
- b. Blood stasis
- c. Liver *qi* stagnation

2. Formula (Yu Jin, *Obstetrics and Gynecology in Chinese Medicine*)

- a. Treatment principle: Tonify kidney *yang*, resolve phlegm, invigorate blood
- b. Works on ovary as well as hypothalamus-pituitary
- c. Research
 1. Increases FSH and E₂
 - a. This will help lead to ovulation
 2. Reduces LH/FSH and T/ E₂ ratio (testosterone/estrogen)

3. Reduces prolactin level and breast engorgement (when liver qi stasis is also addressed)
4. Efficacy
 - a. In one study, 133 women treated with this formula
 - b. 82.7% went to ovulation
 - c. In 76 infertile women, 36 became pregnant

Formula:

Rehmannia <i>Shu Di Huang</i>	12 g.	AB
Dioscorea <i>Shan Yao</i>	12	AA
Polygonatum <i>Huang Jing</i>	12	AA
Epimedium <i>Yin Yang Huo</i>	12	AC
Psoralea <i>Bu Gu Zhi</i>	12	AC
Ligusticum <i>Chuan Xiong</i>	12	K
Gleditsea <i>Zao Jiao Ci</i>	12	CA
Fritillaria <i>Chuan Bei Mu</i>	12	CB
Angelica <i>Dang Gui</i>	12	AB
Persica <i>Tao Ren</i>	12	K

Modifications:

With cold, add:

Aconite <i>Fu Zi</i>	9	E
Cinnamomum <i>Rou Gui</i>	3	E

With liver *qi* stagnation,

Omit:

Gleditsea, <i>Zao Jiao Ci</i>	CA
Fritillaria <i>Chuan Bei Mu</i>	CB

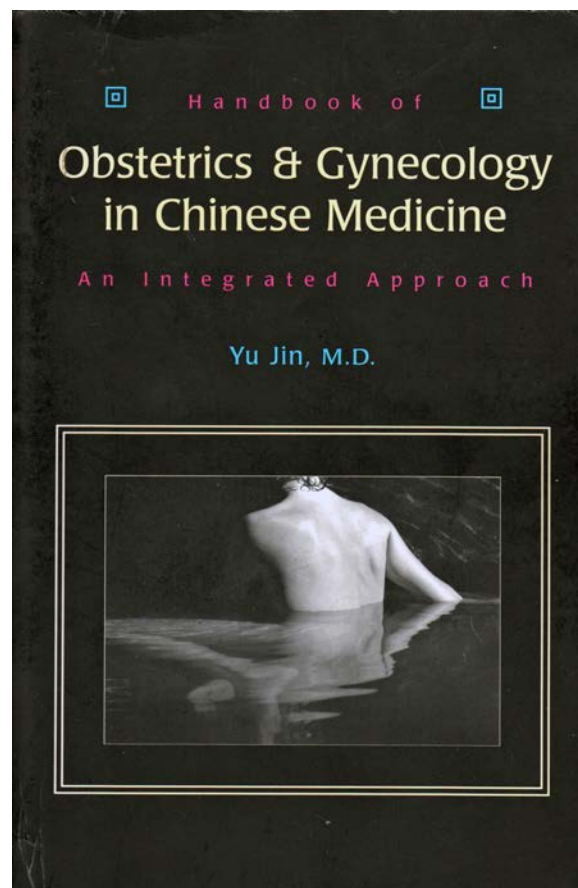
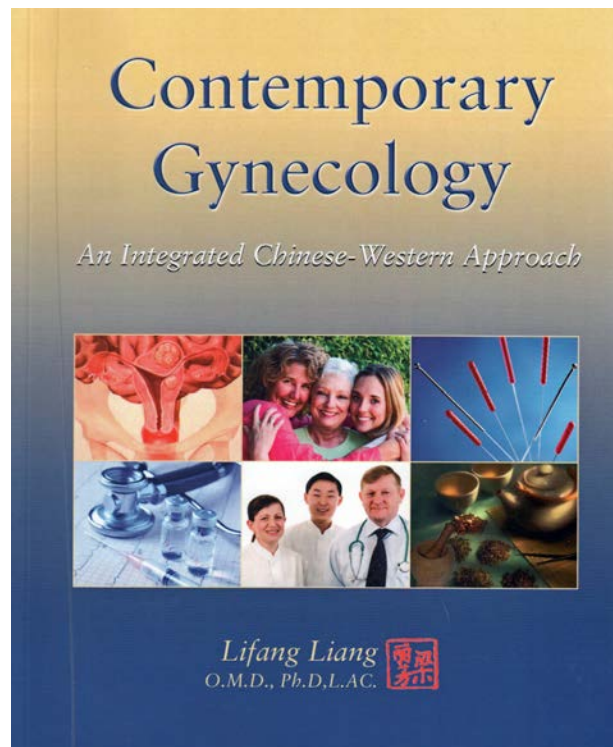
Add:

Moutan <i>Mu Dan Pi</i>	9	DC
Gardenia <i>Zhi Zi</i>	12	DA
Bupleurum <i>Chai Hu</i>	6	BB
Citrus <i>Qing Pi</i>	6	G

TCM OVERVIEW OF GYNECOLOGICAL PRESENTATIONS

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A. BY ZANG-FU PATTERNS

1. LIVER

- a. Liver stasis of *qi* and blood
 - 1. Regulation of menses
 - a. Early, late, missed periods, amenorrhea
 - b. Infertility
 - 2. Dysmenorrhea
 - 3. Breast tenderness
 - 4. Mood swings
 - 5. Insufficient lactation

- b. Liver stasis with heat
 - 1. Stasis leads to heat
 - 2. Early menses
 - 3. Heavy bleeding
 - 4. Nosebleed during menses
 - a. Liver heat scorches the lung

- c. Liver stasis with damp-heat
 - 1. Liver stasis inhibits or attacks spleen
 - a. Damp accumulates in lower legs
 - 2. Damp with liver heat > damp-heat
 - a. Yellow vaginal discharge
 - b. Burning or itching vagina

- d. Liver *yang* hyperactivity
 - 1. Headaches during menses
 - 2. Migraines
 - 3. During pregnancy
 - a. Dizziness
 - b. Hypertension
 - c. Eclampsia

- e. Other factors leading to liver stasis
 - 1. Heat creates liver stasis
 - a. Body heats up between ovulation and menses

1. This facilitates progesterone release
2. Aggravates pre-existing liver stasis
- b. Blood deficiency leads to heat
- c. *Yin* deficiency leads to heat
2. Spleen *qi* deficiency
 - a. Strength of spleen *qi* provides the push for liver to distribute *qi*
 - b. Weak spleen *qi* leads to liver stasis
3. Emotional internalization factors lead to liver stasis
4. Over-exposure to environmental toxins and pharmaceuticals

2. KIDNEY

- a. *Qi* deficiency
 1. Heavy bleeding or miscarriage
 - a. Kidney *qi* cannot secure the blood within the uterus
 2. Uterine prolapse
- b. *Yin* deficiency
 1. Leads to *yin* deficiency heat with hyperactive *yang*
 - a. Early menses
 - b. Heavy bleeding
 - c. Dry vagina
 - d. Early menopause
 - e. Extreme menopausal symptoms
 1. Hot flashes
 2. Sweating
 - f. Symptoms during pregnancy
 1. Anxiety
 2. Restlessness
 2. Leads to deficiency of *jing*
 - a. Amenorrhea
 - b. Congenital infertility

- c. *Yang* deficiency
 - 1. Necessary to warm the uterus
 - a. Infertility
 - b. Miscarriage
 - 2. Supports spleen function
 - a. Loose stools or diarrhea during menses
 - b. Vaginal discharge without odor
 - 3. Benefits movement of water
 - a. Edema
 - b. Abdominal bloating
 - 4. Leads to blood cold
 - a. Dysmenorrhea

- d. *Jing* deficiency
 - 1. Amenorrhea
 - 2. Congenital infertility

3. SPLEEN

- a. *Qi* deficiency
 - 1. Strength pulls organs upwards
 - a. Deficiency leads to prolapse
 - b. Miscarriage
 - 2. Constrains the blood
 - a. Early or heavy menses
 - b. Galactorrhea – spillage of breast milk
 - 3. Responsible for strength of blood
 - a. Deficiency leads to
 - 1. Amenorrhea
 - 2. Poor lactation
 - 4. Transforms dampness
 - a. Vaginal discharge
 - b. Morning sickness

- b. *Yang* deficiency
 - 1. Deficiency leads to inability to move and transform dampness
 - a. White/clear vaginal discharge
 - b. Diarrhea/loose stools during menses
 - c. Water swelling in third trimester

- c. Phlegm-damp obstruction
 - 1. Usually due to spleen *qi* deficiency
 - a. Nausea
 - b. Vaginal discharge
 - c. Morning sickness
 - d. Amenorrhea
 - 2. Dampness can congeal to phlegm
 - a. Masses, tumors, cysts in uterus or ovaries
 - b. Infertility

4. *QI* PATTERNS

- a. *Qi* deficiency
 - 1. Associated with kidney and spleen, combined
 - a. Early or heavy menses
 - b. Postpartum hemorrhage
 - c. Uterine prolapse
 - d. Difficulty holding fetus = miscarriage

- b. *Qi* stasis
 - 1. Delayed menses
 - 2. Amenorrhea
 - 3. Difficult lactation
 - 4. Pain in breasts
 - 5. Leads to blood stasis
 - a. Painful menses
 - b. Creates masses, uterine fibroids

5. BLOOD PATTERNS

- a. Blood deficiency
 1. Delayed menses
 2. Scanty menstrual blood
 - a. Blood is light, pale, watery, thin
 3. Amenorrhea
 4. Lower abdominal pain following menses
 5. Infertility or miscarriage
 6. Insufficient milk production

- b. Blood Stasis
 1. Pain
 - a. Menstrual or postpartum
 2. Amenorrhea
 3. Scanty menses
 4. Heavy menses
 5. Tumors, fibroids
 6. Endometriosis
 7. Postpartum hemorrhage
 8. Ectopic pregnancy

- c. Blood cold
 1. Deficiency cold
 - a. Due to deficiency of kidney *yang*
 - b. Blood flows slowly
 1. Periods late
 2. Amenorrhea
 - c. Pain that is relieved by warmth
 - d. Clear vaginal discharge
 - e. Infertility
 2. Excess cold
 - a. May be due to exogenous wind-cold into uterus
 - b. Sharp pain relieved by heat
 - c. Slowed blood
 1. Late menses

- d. Blood heat
 - 1. Deficiency heat
 - a. Due to deficiency of kidney *yin*
 - b. Early menses
 - c. Heavy flow
 - d. Bright red blood
 - e. Pregnancy
 - 1. Restless fetus
 - 2. Miscarriage
 - 2. Excess heat
 - a. Early menses
 - b. Heavy flow
 - c. Nosebleed during menses

B. BY CONDITION

1. MENSES

- a. Too early
 - 1. Liver stasis of *qi* and blood
 - 2. Liver stasis with heat
 - 3. Blood heat - excess
 - 4. *Yin* deficiency
 - 5. *Qi* deficiency – spleen and/or kidney
 - 6. Blood heat – deficiency
- b. Delayed
 - 1. Liver stasis of *qi* and blood
 - 2. Blood cold - excess
 - 3. Blood deficiency
 - 4. Blood cold – deficiency
 - 5. *Qi* deficiency
- c. Missed periods
 - 1. Liver stasis of *qi* and blood

- d. Dysmenorrhea
 - 1. Liver stasis of *qi* and blood
 - 2. Blood stasis
 - 3. Obstruction of cold and dampness
 - 4. Descent of damp-heat
 - 5. Blood cold – deficiency
 - 6. Deficiency of *qi* and blood

- e. Heavy bleeding
 - 1. Liver stasis with heat
 - 2. Blood stasis
 - 3. Blood heat - excess
 - 4. *Qi* deficiency – spleen and/or kidney
 - 5. *Yin* deficiency
 - 6. Blood heat – deficiency

- f. Scanty bleeding
 - 1. Blood stasis
 - 2. Blood deficiency

- g. Post-menstrual spotting
 - 1. *Qi* deficiency – spleen and/or kidney
 - 2. Blood deficiency

- h. Amenorrhea
 - 1. Liver stasis of *qi* and blood
 - 2. Blood stasis
 - 3. Spleen *qi* deficiency with phlegm-dampness
 - 4. Kidney *yin* deficiency
 - 5. *Jing* deficiency
 - 6. *Qi* deficiency – spleen and/or kidney
 - 7. Blood deficiency
 - 8. Blood cold – deficiency

- i. Other symptoms during menses
 - 1. Blood discharge pale or watery

- a. Blood deficiency
- 2. Blood discharge with clots or thick blood
 - a. Blood stasis
- 3. Headaches
 - a. Liver *yang* hyperactivity
- 4. Nosebleed
 - a. Liver stasis with heat
 - b. Blood heat - excess
- 5. Edema
 - a. Liver stasis inhibits or attacks spleen
 - b. Kidney *yang* deficiency
- 6. Loose stools or diarrhea
 - a. Kidney *yang* deficiency
- 7. Abdominal bloating
 - a. Kidney *yang* deficiency
- 8. Lower abdominal pain following menses
 - a. Blood deficiency

2. PREMENSTRUAL SYNDROME

- a. Mood swings, irritability
 - b. Liver stasis of *qi* and blood
- Breast tenderness
- 1. Liver stasis of *qi* and blood

3. INFERTILITY

- a. Liver stasis of *qi* and blood
- b. Blood stasis
- c. Kidney *yin* deficiency
- d. Kidney *yang* deficiency
- e. *Jing* deficiency
- f. Spleen *qi* deficiency with phlegm-dampness
- g. Blood deficiency
- h. Blood cold – deficiency

4. PROBLEMS DURING PREGNANCY

- a. Morning sickness
 - 1. Spleen *qi* deficiency
 - 2. Spleen *qi* deficiency with phlegm-dampness
 - 3. Liver stasis

- b. Dizziness
 - 1. Liver *yang* hyperactivity
 - 2. Spleen *qi* deficiency with phlegm-dampness

- c. Hypertension
 - 1. Liver *yang* hyperactivity

- d. Edema or ankle swelling
 - 1. Kidney *yang* deficiency

- e. Eclampsia
 - 1. Liver *yang* hyperactivity

- f. Threatened or frequent miscarriage
 - 1. *Qi* deficiency – spleen and/or kidney
 - 2. Kidney *yang* deficiency
 - 3. Blood deficiency
 - 4. Blood heat – deficiency

- g. Anxiety and restlessness
 - 1. *Yin* deficiency

- h. Restless fetus
 - 1. Blood heat – deficiency

- i. Lactation – insufficient
 - 1. Liver stasis of *qi* and blood
 - 2. Spleen *qi* deficiency
 - 3. Blood deficiency

- j. Lactation – heavy or spilling
 - 1. Spleen *qi* deficiency
- k. Post-partum hemorrhage or spotting
 - 1. Blood stasis
 - 2. *Qi* deficiency – spleen and/or kidney
- l. Postpartum pain
 - 1. Blood stasis
 - 2. Exogenous cold enters uterus

5. MENOPAUSAL SYNDROME

- a. Kidney patterns
 - 1. Kidney *yin* deficiency
 - 2. Kidney *yang* deficiency
 - 3. Kidney *qi* deficiency
- b. Liver stasis of *qi* and blood

6. OTHER GYNECOLOGICAL SYMPTOMS

- a. Vaginal discharge – yellow
 - 1. Liver stasis with damp-heat
 - 2. Descent of damp-heat
 - 3. Exogenous damp-heat with heat-toxins
 - 4. Kidney *yin* deficiency
- b. Vaginal discharge – white or clear
 - 1. Kidney *yang* deficiency
 - 2. Spleen *qi* deficiency
 - 3. Spleen *qi* deficiency with phlegm-dampness
 - 4. Blood cold - deficiency

- c. Burning or itching vagina
 - 1. Liver stasis with damp-heat
 - 2. Kidney *yin* deficiency
- d. Vagina – dry
 - 1. *Yin* deficiency
- e. Uterine prolapse
 - 1. Spleen *qi* deficiency
 - 2. Kidney *qi* deficiency
- f. Edema
 - 1. Kidney *yang* deficiency
 - 2. *Qi* deficiency – spleen and/or kidney
- g. Masses, tumors, cysts
 - 1. Spleen *qi* deficiency with phlegm-dampness
 - 2. Stasis of liver *qi* and blood
 - 3. Blood stasis
- h. Endometriosis
 - 1. Damp-heat
 - 2. Blood stasis
 - 3. Stasis of phlegm-dampness
 - 4. Heat toxins

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 Completed: 10/15/2014
 Reported : 10/20/2014

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Results For:

O.G.

Age: 37

Gender: Female

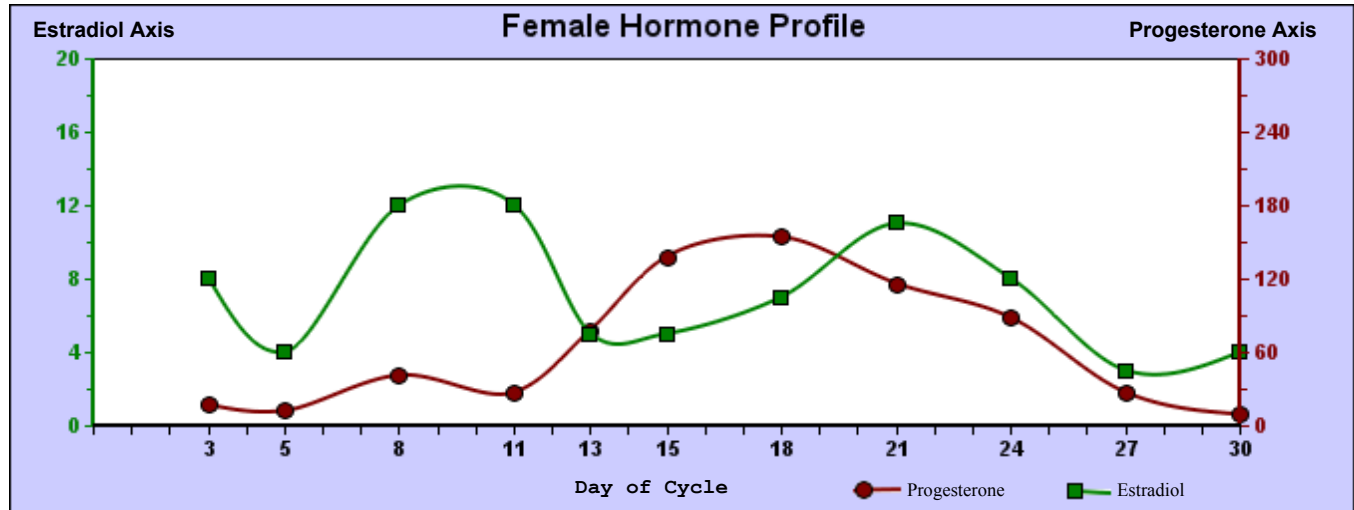
Patient's Tel:

Specimen Collected: 10/05/2014

eFHP Expanded Female Hormone Panel - Saliva

Day of Cycle	Day	3	5	8	11	13	15	18	21	24	27	30
Estradiol	pg/ml	8	4	12	12	5	5	7	11	8	3	4
Progesterone	pg/ml	17	12	41	27	78	138	154	116	88	27	9

Cycle Information	Start	09/06/2014	Ranges	Phase	Estradiol	Progesterone
	End	10/05/2014		Follicular	2 - 10 pg/ml	20 - 100 pg/ml
	Length	29		Preovulatory	7 - 25 pg/ml	
			Luteal	3 - 16 pg/ml	65 - 500 pg/ml	



Test	Description	Result	Ref Values
DHEA	Dehydroepiandrosterone Free [DHEA + DHEA-S]	Pooled Value 9 Normal	Adults (M/F): 3-10 ng/ml
TTF	Free Testosterone	Cycle Average 40 Elevated	Borderline: 6-9 pg/ml Normal: 10-38 pg/ml

Concern for elevation. Rule out exogenous testosterone intake/exposure. Soluble fibers, e.g. apple pectin is worth considering.

I. Progesterone (P) Interpretation

Luteal Surge of Progesterone Occurred Around Day 12
Luteal Phase Length is Normal, Expected Range 12-18 days

Luteal Phase Progesterone Analysis:

Net Output: 457 pg
Total Output: 610 pg
Relative Net: 75 %. Expected Minimum is 55%

Luteal P Output Distribution:

Patient approached 90% of Progesterone Output by Day 22 of Period or by Day 10 of Luteal Phase.
Luteal Phase Deficit Type III: Suboptimal Distribution of Progesterone Output over Luteal Phase.

II. Estradiol Interpretation

Possible Double Ovulation.
Estradiol Peak is Not in the Acceptable Time Frame.
Normal Luteal Phase Estradiol Output

Follicular E2 Surge Analysis

This ratio is an index of ovarian capacity to respond to FSH stimulation. A low ratio indicates a weak FSH Surge or low ovarian capacity and response.

Patient value: 1.50 Acceptable values: > 1.8

Estradiol Analysis:

Total Cycle Estradiol Output: 79 pg Range: 22 - 110 pg
Borderline Low: 22 - 31 pg
Preovulatory Phase Estradiol Output: 36 pg
Luteal Phase Estradiol Output: 43 pg
Relative Luteal Phase Estradiol Output: 54 %

Follicular Estrogen Priming Index (ETP)

(a) The ETP is a quantitation of Estrogen Exposure in target tissues (uterus, breast, brain, bone, skin, etc.) during the follicular phase. A sufficient Estrogen exposure is required for optimal tissue response. Low ETP values favor reduced functional impact of Progesterone on E2 sub-primed tissue.

(b) The index is a function of concentration and duration of Estrogen exposure. Upper and lower reference values are individualized for each patient based on the period length.

(c) Significance: The genomic influence of Estrogen on target tissue structure and organization is cumulative and prolonged:

Example 1 - Breast, fat cell, and fibroid tissue proliferation under increased Estrogen influence is rather lasting; because once formed, the maintenance of the proliferated tissue requires minimal amounts of Estrogen.

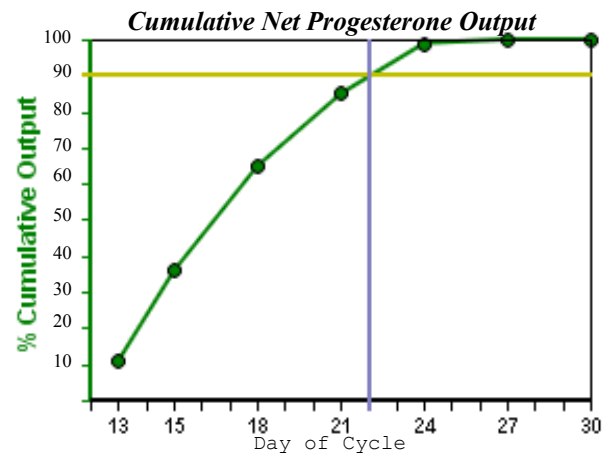
Example 2 - Degenerative effects of suboptimal Estrogen (E2) and Progesterone (P1) on bone tissue are also prolonged. Bones require optimal E2 and P1 balance for long periods of time to reverse osteoporosis.

ETP Patient value: 672 Reference: 292 - 1460

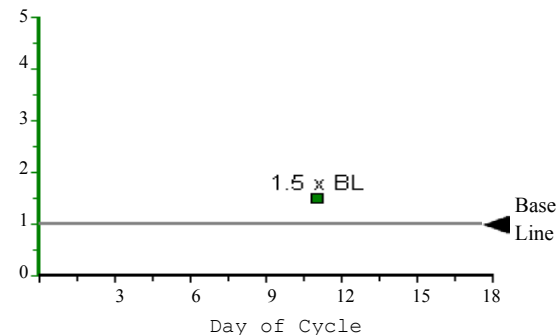
III. Progesterone: Estradiol Balance (P/E2)

Luteal P/E2 target range: 30 - 40

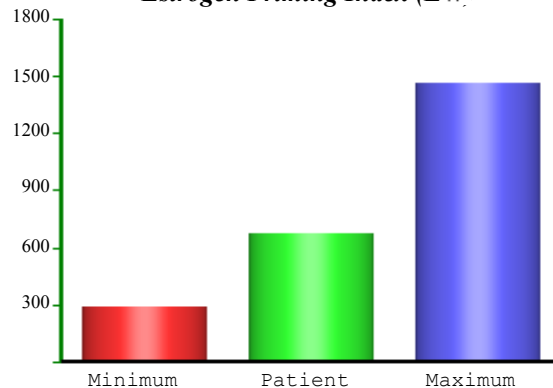
The Average Ratio of Luteal Phase Output of Progesterone to Estradiol = 14



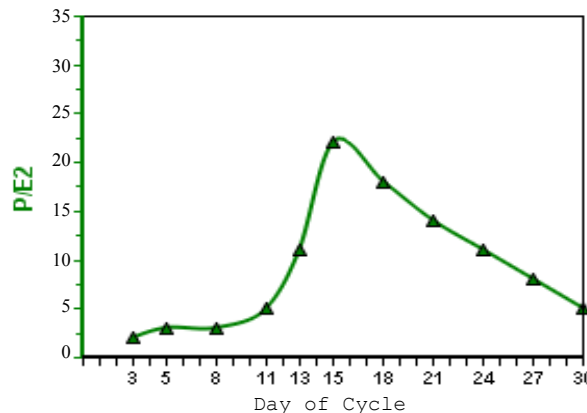
Follicular E2 Surge Analysis



Estrogen Priming Index (ETP)

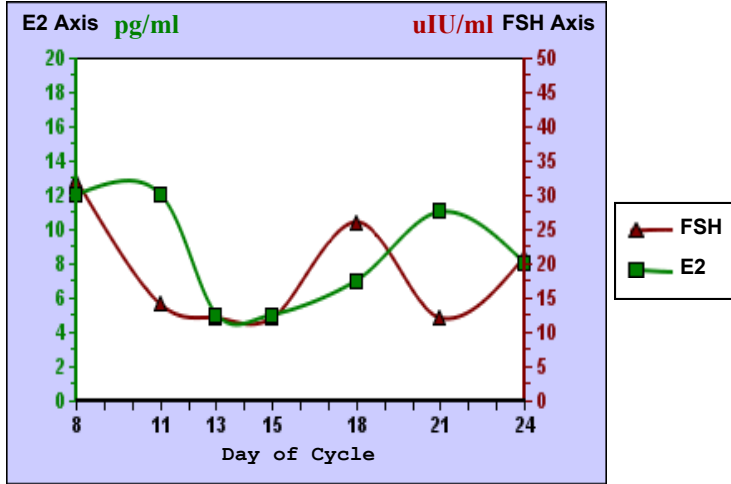


P/E2 Balance Over Time



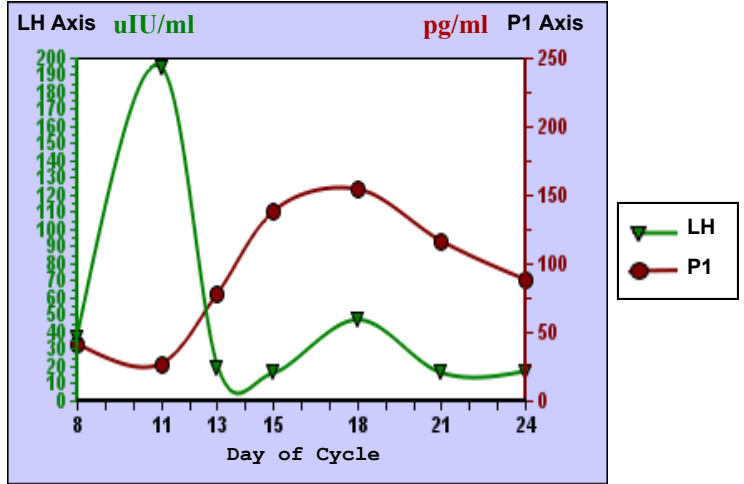
FSH and E2 Surge Analysis

Cycle Day	8	11	13	15	18	21	24
<i>Estradiol</i>	12	12	5	5	7	11	8
<i>FSH</i>	32	14	<12	<12	26	<12	21



LH and P1 Surge Analysis

Day of cycle	8	11	13	15	18	21	24
<i>Progesterone</i>	41	27	78	138	154	116	88
<i>LH</i>	37	194	19	16	47	16	17



The FSH Surge must attain a certain level (amplitude) to mediate maturity and selection of the dominant follicle, and promote optimal conversion of androgen to estrogen.

Patient Value: **2.25** Range: 2.3 - 4.7

The FSH Output reflects the pituitary capacity to release FSH in the periovulatory time window. This biomarker is an index for the NET effect of all higher centers and other hormones combined on FSH production. The FSH output tends to increase with age and also varies with diet, stress level, hormone and medication use ...

Patient Value: **129.00** Range: Variable

The Follicle Response Index is a biomarker of the quality of follicular response to FSH stimulation. Lower values reflect reduced ovarian sensitivity to FSH. The lowest sensitivity occurs at menopause and on.

Patient Value: **0.66** Range: 0.5 - 2.3

The LH Surge must attain a certain threshold to induce, and trigger ovulation to stimulate the formation of a viable corpus luteum for progesterone production.

Patient Value: **9.23** Range: 3.3 - 6.6

The LH Output reflects the pituitary capacity to release LH at ovulation time and in the early luteal phase. The timing and output of LH reflects the net effect of all influences (diet, stress, hormones, age ... etc) on this gonadotropin.

Patient Value: **346.00** Range: Variable

The Corpus Luteum Response Index reflects the degree of corpus luteum responsiveness to LH measured as luteal progesterone output. Corpus size, differentiation + sensitivity determine the response. LH increases with age as ovarian response blunts.

Patient Value: **8.11** Range: 8 - 27

Please Note: Beginning August 28, 2010, Diagnos-Techs has updated reference ranges for testosterone and estradiol using more advanced salivary tests. New reference ranges have been established according to the latest CLSI guidelines.

Example of Restoration Plan:

SIGNIFICANT CYCLE IRREGULARITIES LEADING TO PROBLEMS WITH COMPUTER INTERPRETATION.

IF YOU HAVE QUESTIONS REGARDING INTERPRETATION OF RESULTS, PLEASE CALL THE MEDICAL SUPPORT DEPARTMENT FOR MORE INFORMATION.

Diagnosis Code: Not Provided To The Lab.

Please Note: All examples of patient treatment or therapy are for illustrative and/or educational purpose. Use this report in context of the clinical picture and patient history before initiating hormone or other therapies or recommendations.

COURTESY INTERPRETATION of test and technical support are available upon request, to Physician Only