



Case Studies in Management of the Menopausal Patient

Pamela W. Smith, M.D., MPH, MS

May 25, 2016





Michael Chapman, ND
Medical Education Specialist - Asheville



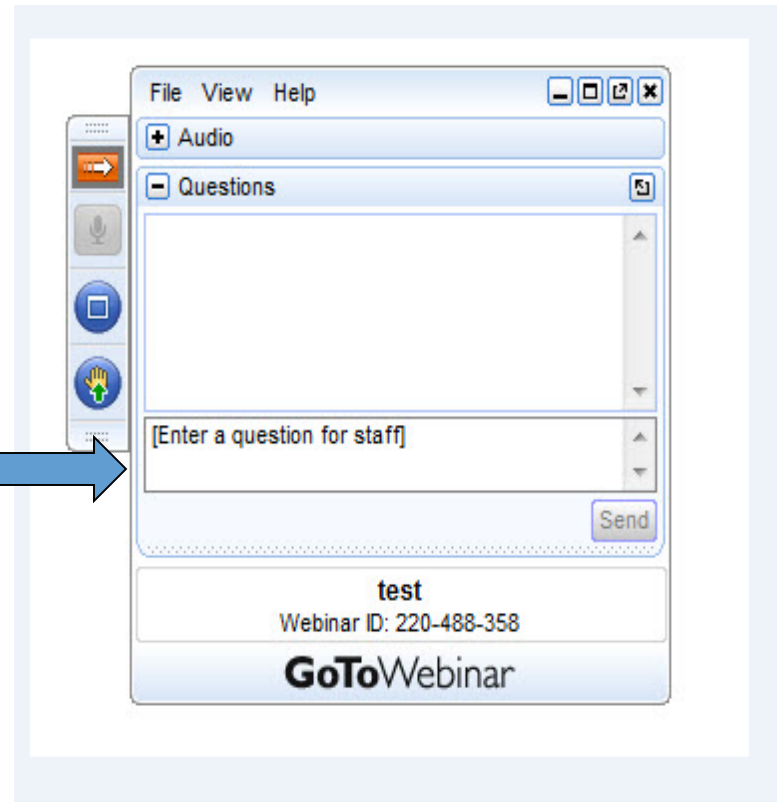
Pamela W. Smith, M.D., MPH, MS



Technical Issues & Clinical Questions

Please type any technical issue or clinical question into either the “Chat” or “Questions” boxes, making sure to send them to “Organizer” at any time during the webinar.

We will be compiling your clinical questions and answering as many as we can the final 15 minutes of the webinar.





Need More Resources?

Ensure you have an account!



Case Studies in Management of the Menopausal Patient

Pamela W. Smith, M.D., MPH, MS

May 25, 2016



Disclaimer

- The suggested dosages are for educational purposes only.
- They are suggestions for patients with normal renal and hepatic function.
- They are based upon my research and my personal and professional experiences after reviewing 20,000 saliva tests.
- They are not intended as a substitute for a personalized approach to each patient but are designed instead to be a guideline.
- Genova Diagnostics and Pamela W. Smith, M.D., MPH, MS are not responsible for any adverse effects or consequences resulting from the use of any of these suggestions or preparations in this seminar.



Overview

- Health Considerations for the Menopausal Patient
 - Common Menopausal Symptoms
 - Primary Medical Concerns
- Core Diagnostics for the Management of the Menopausal Woman
 - Salivary Hormones + Genova's Therapeutic Cohort Results Cover Page
- Hormone Replacement Therapy and Breast Cancer Risk
- Core Therapeutics for the Management of the Menopausal Woman
- Case Studies



Health Considerations for the Menopausal Patient





Symptoms of Menopause

- Hot flashes
- Night sweats
- Vaginal dryness
- Anxiety
- Mood swings
- Irritability
- Insomnia
- Depression
- Migraine headaches
- Memory lapses
- Weight gain
- Loss of sexual interest
- Hair growth on face
- Painful intercourse
- Panic attacks
- Weird dreams
- Urinary tract infections
- Vaginal itching
- Lower back pain
- Bloating
- Dizzy spells
- Panic attacks
- Skin feeling crawly
- Flatulence
- Indigestion
- Osteoporosis
- Aching ankles, knees, wrists, shoulders, heels
- Hair loss
- Frequent urination
- Snoring
- Sore breasts
- Palpitations
- Varicose veins
- Urinary leakage



Perimenopause/Menopause

Primary Medical Concerns

Cardiovascular Health

- Estrogen is cardioprotective.
- After menopause → HDL down, LDL up, total cholesterol up

Bone Health

- Declining levels of estrogen in menopause pose the greatest threat to bone health in post-menopausal women



Core Diagnostics for the Management of the Menopausal Woman

- Genova Diagnostics' Therapeutic Cohort Results Cover Page
- Salivary Sex Hormone Profiles



Genova's Therapeutic Ranges Cover Page

Genova Diagnostics includes a Therapeutic Ranges Cover Page on four of our salivary sex hormone profiles:

Menopause™

Menopause
Plus™

Menopause
Check Plus™

One Day
Hormone Check™

- This cover page provides Therapeutic Ranges for sex hormones based on a select cohort of supplemented peri/menopausal women – and enables clinicians to compare their patient's results to this treated group of individuals.
- These profiles also include Genova's standard Reference Ranges which provide comparison of patient results to other relevant healthy cohorts of patients.

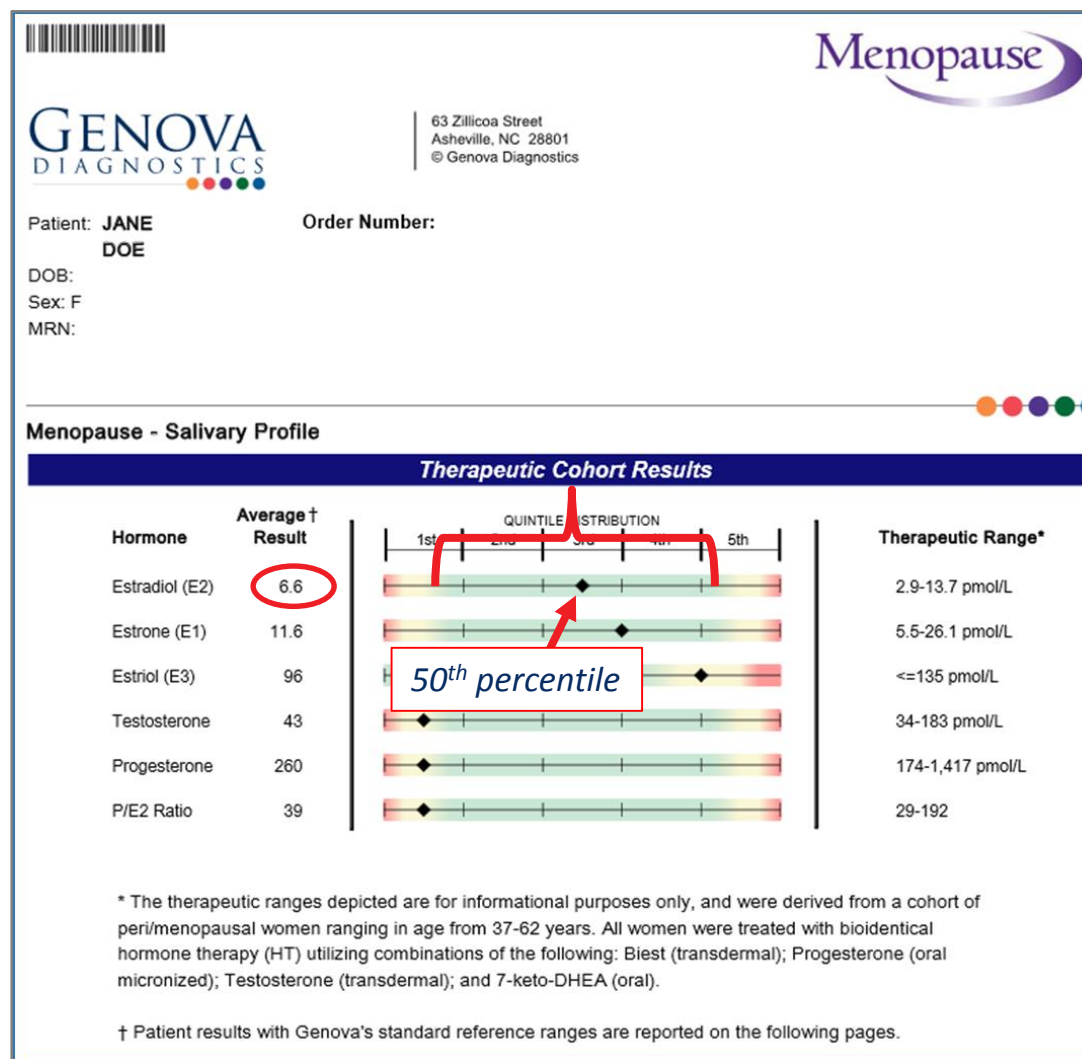


Genova's Therapeutic Range

- Genova Diagnostics' Therapeutic Range specifically refers to the range of results that were established from a cohort of patients receiving therapeutic hormone treatment
- Because the therapeutic cohort comprises women who are being treated with hormone therapy due to symptoms or health problems, the therapeutic range does not indicate whether a specific individual's test results are “normal” or “abnormal”
 - A detailed explanation of the Therapeutic Range Cover Page can be found on Genova's website at the Endocrine University

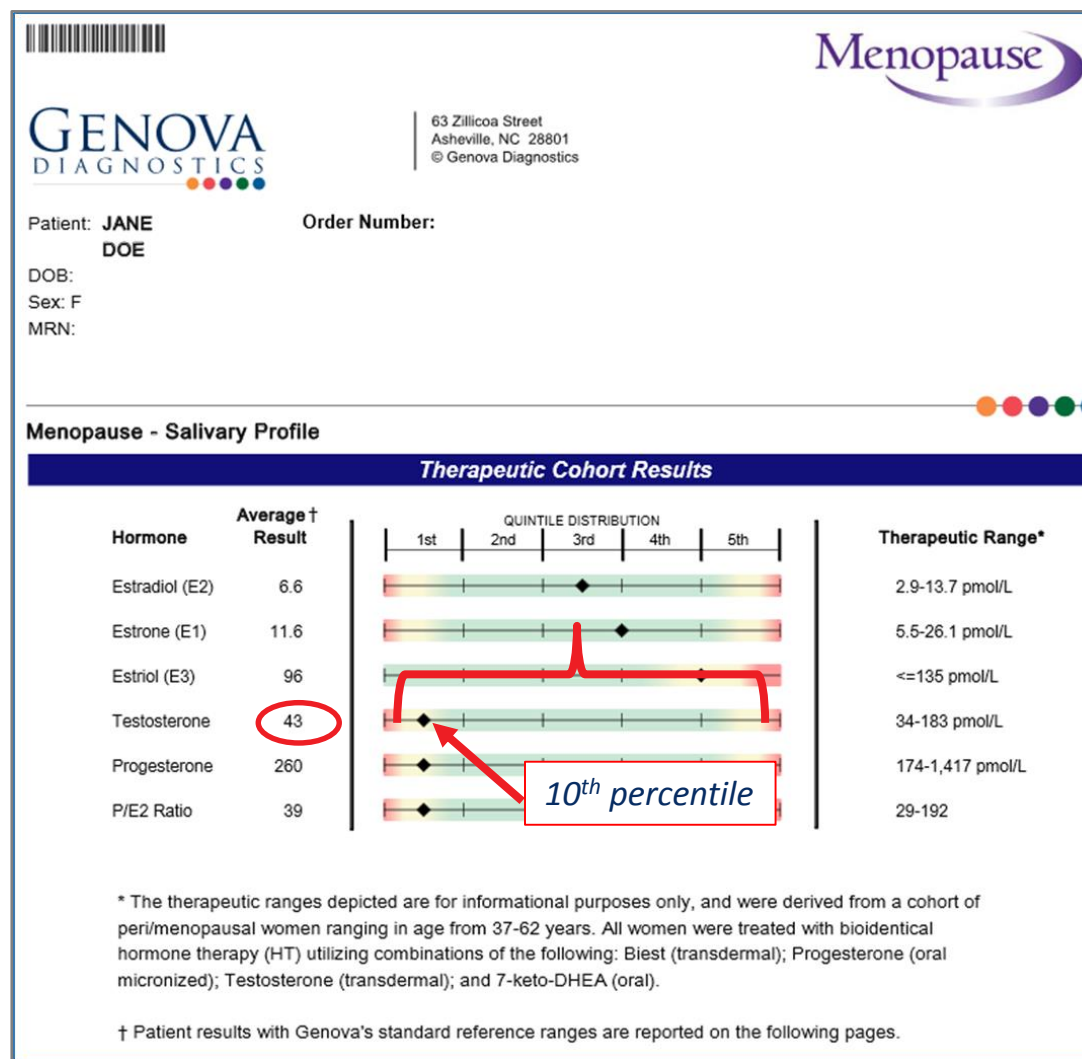


How Do I Interpret the Graphic Representation of the Therapeutic Range?





How Do I Interpret the Graphic Representation of the Therapeutic Range?





Core Therapeutics for the Management of the Menopausal Woman



Core Therapeutics: Biodental Hormone Replacement Therapy

Prescribing Hormones

- Before prescribing hormones it is very important to know how much of each hormone that the body makes in a day!





Twenty-Four-Hour Production Rates of Sex Steroids in Women At Different Stages of the Menstrual Cycle

Sex Steroids	Early Follicular	Preovulatory	Midluteal
Progesterone (mg)	1.0	4.0	25.0
17-hydroxy-progesterone (mg)	0.5	4.0	4.0
Dehydroepi-androsterone (mg)	7.0	7.0	7.0
Androstenedione (mg)	2.6	4.7	3.4
Testosterone (mcg)	144.0	171.0	126
Estrone (mcg)	50.0	350.0	250.0
Estradiol (mcg)	36.0	380.0	250.0



Start Low and Go Slow!





It Is All About Balance!





Do Not Give Estrogen by Mouth for HRT





Estrogen Given by Mouth Can...

- Increase blood pressure
- Increase triglycerides
- Increase estrone
- Cause gallstones
- Elevate liver enzymes
- Increase SHBG (decreases testosterone)
- Interrupt tyryptophan metabolism and consequently serotonin metabolism
- Lower growth hormone
- Increase prothrombic effects
- Increase CRP
- Increase carbohydrate cravings



Methods of Dispensing Hormones Transdermally

- Can put in syringe: best to use 1 mL so that the hormone is dispensed over a wider area for better absorption. Use a 10 mL syringe
 - Larger syringes are hard for the patient to use and see the dosages
- Best not to dispense in less than 0.5 mL
- Can instead put in MegaPump. This pump comes in 30 mL, 75 mL, and 150 mL sizes
- The 30 mL and 75 mL dispenses 0.5 mL
- The 150 mL size dispenses 1.0 mL



HRT: Disease Risk Including Breast Cancer Risk





HRT: Disease Risk

In a 2013 study: researchers estimated that over the past decade between 18,600 to 91,600 postmenopausal women, ages 50-59 years old, who had had a hysterectomy may have died prematurely because they did not take estrogen

- Sarrel, P., et al., “The mortality toll of estrogen avoidance: An analysis of excess deaths among hysterectomized women aged 50 to 59 years,” Amer Jour Public Health 2013; July 18



HRT: Disease Risk (Cont.)

Another study which was a meta-analysis from 27 published studies showed a 28% reduction in mortality in menopausal women under age 60 who used hormone replacement therapy and the participants also had improved quality of life

- Salpeter, S., et al., “Bayesian meta-analysis of hormone therapy and mortality in younger postmenopausal women,” *Amer Jour Med* 2009; 22(11):1016-22



HRT and Breast Cancer Risk (Cont.)

Studies have shown that progesterone does NOT induce estrogen-stimulated breast cell proliferation

- Murkes, D., et al., “Effects of percutaneous estradiol-oral progesterone versus oral conjugated equine estrogens-medroxyprogesterone acetate on breast cell proliferation and bel-2 protein in healthy women,” *Fertil Steril* 2011; 95(3):1188-91
- Wood, C., et al., “Transcriptional profiles of progesterone effects in the postmenopausal breast,” *Breast Cancer Res Treat* 2009; 114(2):233-42



References

- Neubauer, H., et al., “Overexpression of progesterone receptor membrane component 1: possible mechanism for increased breast cancer risk with norethisterone in hormone therapy,” *Menopause* 2013; 20(5):504-10
- Murkes, D., et al., “Percutaneous estradiol/oral micronized progesterone has less-adverse effects and different gene regulations than oral conjugated equine estrogens/medroxyprogesterone acetate in the breast of healthy women in vivo,” *Gynecol Endocrinol* 2012; 28(Suppl 2):12-5



References

- Chang, K., et al., “Influences of percutaneous administration of estradiol and progesterone on human breast epithelial cell cycle in vivo,” *Fertil Steril* 1995; 63(4):785-91
- Foidart, J., et al., “Estradiol and progesterone regulate the proliferation of human breast epithelial cells,” *Fertil Steril* 1998; 69(5):963-69
- Mueck, A., et al., “Comparison of the proliferative effects of estradiol and conjugated equine estrogens on human breast cancer cells and impact of continuous combined progestogen addiction,” *Climacteric* 2003; 6(3):221-27



HRT and Breast Cancer Risk (Cont.)

- Natural progesterone has been shown to decrease the risk of developing breast cancer
- A study looked at 80,000 postmenopausal women for 8 years using different kinds of HRT
 - It found that women who used estrogen in combination with synthetic progestin had a 69% increased risk of developing breast cancer when compared to women who never took HRT
 - Women who used progesterone in combination with estrogen had no increased risk in developing breast cancer compared to women that did not use HRT and also had a decreased risk in developing breast cancer compared to the women that used progestin



Reference

- Fournier, A., et al., “Unequal risks for breast cancer associated with different hormone replacement therapies: results from the E3N cohort study,” Breast Cancer Res Treat 2008; 107(1):103-11



HRT and Breast Cancer Risk (Cont.)

- Another study done by the same researchers found a 40% increased risk of developing breast cancer in women who used estrogen with progestin
- In women who used estrogen combined with progesterone there was a trend toward a decreased risk of developing breast cancer
 - Fournier, A., et al., “Breast cancer risk in relation to different types of hormone replacement therapy in the E3N-EPIC cohort,” *Int Jour Cancer* 2005; 114(3):448-54



Case Studies





Case #1
Six Day Saliva Test



Menopause Plus

A 6-day saliva test is very beneficial to do for peri-menopausal women since their hormones may change over time if they do not want to do a 28-day test

GENOVA DIAGNOSTICS 63 Zillock Street, Asheville, NC 28801, © Genova Diagnostics

Patient: JANE DOE
DOB: December 31, 1968
Sex: F
MRN:

Order Number: Completed February 26, 2016
Received February 26, 2016
Collected February 26, 2016

Menopause Plus - Salivary Profile

Therapeutic Cohort Results

Hormone	Average T Result	Therapeutic Range*
Estradiol (E2)	8.7	2.9-13.7 pmol/L
Estrone (E1)	14.5	5.5-26.1 pmol/L
Estril (E3)	121	<=155 pmol/L
Testosterone	140	34-183 pmol/L
Progesterone	166	174-1,417 pmol/L
PIE2 Ratio	19	29-152

* The therapeutic ranges depicted are for informational purposes only, and were derived from a cohort of peri-menopausal women ranging in age from 37-62 years. All women were treated with bioidentical hormone therapy (HT) utilizing combinations of the following: BiEst (transdermal), Progesterone (oral micronized), Testosterone (transdermal), and 7-Keto-DHEA (oral).

† Patient results with Genova's standard reference ranges are reported on the following pages.

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GENOVA DIAGNOSTICS 63 Zillock Street, Asheville, NC 28801, © Genova Diagnostics

Patient: JANE DOE
DOB: December 31, 1968
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Order Number: Completed February 26, 2016
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Menopause Plus

Salivary Hormone Results

Sample #	Estrone (E1) (pmol/L)	Estradiol (E2) (pmol/L)	Estril (E3) (pmol/L)	Progesterone (pmol/L)
1	12.2	5.9	92	154
2	14.8	7.6	124	193
3	16.6	12.6	148	152
Average	14.5	8.7	121	166

Average Estradiol # pmol/L: **8.7** Testosterone # pmol/L: **140**

Reference Range	Reference Range
Postmenopausal: 2.8-8.8 pmol/L	Postmenopausal: 34-148 pmol/L
Peri-menopausal: 4.5-17.1 pmol/L	Peri-menopausal: 34-148 pmol/L
Pre-menopausal: 2.8-8.8 pmol/L	Pre-menopausal: 116-513 pmol/L
Menopausal: 37.8 pmol/L	Menopausal: 141-659 pmol/L
*Pack 2 Days 11 and 12	*Pack 4 Days 18 and 20

Average Estrone pmol/L: **14.5** Average Progesterone # pmol/L: **166**

Reference Range	Reference Range
Menopausal: 4.7-18.9 pmol/L	Postmenopausal: 125-893 pmol/L
Peri-menopausal: 4.7-18.9 pmol/L	Peri-menopausal: 335-1385 pmol/L
Pre-menopausal: 4.7-18.9 pmol/L	Pre-menopausal: 145-797 pmol/L
Menopausal: 4.7-18.9 pmol/L	Menopausal: 183-869 pmol/L
Menopausal: 4.7-18.9 pmol/L	Menopausal: 141-659 pmol/L

Average Estril pmol/L: **121** PIE2 Ratio: **19**

Reference Range	Reference Range
Menopausal: <=155 pmol/L	Estrogen: 23-159
Peri-menopausal: <=155 pmol/L	Luteal: 26-141
Pre-menopausal: <=155 pmol/L	Menopausal: 23-119

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Comprehensive Melatonin Profile

Salivary Melatonin

Reference Range:
7AM - 9AM: <=10.50 pg/mL
3PM - 5PM: <=0.88 pg/mL
2:00AM - 3:00AM: 2.53-30.67 pg/mL

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Adrenocortex Stress Profile (Saliva)

Salivary Cortisol and DHEA

Reference Range:
1 Hour After Rising 7AM - 9AM: 0.27-1.18 mcg/dL
11AM - 1PM: 0.10-0.41 mcg/dL
3PM - 5PM: 0.05-0.27 mcg/dL
10PM - 12AM: 0.03-0.14 mcg/dL

Hormone	Reference Range	Reference Range
DHEA 7am - 9am	569	71-640 pg/mL
DHEA: Cortisol Ratio 10,000	281	116-1,168

Commentary
The performance characteristics of all assays have been verified by Genova Diagnostics, Inc. Unless otherwise noted with *, the assay has not been cleared by the U.S. Food and Drug Administration.
Methodology: EIA and LIA
Commentary is provided to the practitioner for educational purposes, and should not be interpreted as diagnostic or treatment recommendations. Diagnosis and treatment decisions are the responsibility of the practitioner.

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Peri-Menopausal Women

- You start the test on day 16 of their cycle
- If you are going to do a one day test then day 20 or 21 of their cycle is best
- If the patient really needs to do a 28-day test but will not do one for one reason or another then have them do a one day test on day 4 of their cycle and another one day test on day 21 of their cycle
 - For younger women a 28-day always gives you more information

Case #1: Six Day Test



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Asheville, NC 28801
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Patient: **JANE
DOE**

Order Number:

DOB:

Sex: F

MRN:



Menopause - Salivary Profile

Therapeutic Cohort Results

Hormone	Average † Result	QUINTILE DISTRIBUTION					Therapeutic Range*
		1st	2nd	3rd	4th	5th	
Estradiol (E2)	6.6						2.9-13.7 pmol/L
Estrone (E1)	11.6						5.5-26.1 pmol/L
Estriol (E3)	96						<=135 pmol/L
Testosterone	43						34-183 pmol/L
Progesterone	260						174-1,417 pmol/L
P/E2 Ratio	39						29-192

* The therapeutic ranges depicted are for informational purposes only, and were derived from a cohort of peri/menopausal women ranging in age from 37-62 years. All women were treated with bioidentical hormone therapy (HT) utilizing combinations of the following: Biest (transdermal); Progesterone (oral micronized); Testosterone (transdermal); and 7-keto-DHEA (oral).

† Patient results with Genova's standard reference ranges are reported on the following pages.

Case #1: Six Day Test

Salivary Hormone Results

Sample #	Estrone (E1) (pmol/L)	Estradiol (E2) (pmol/L)	Estriol (E3) (pmol/L)	Progesterone (pmol/L)
1	11.9	6.4	<70	282
2	10.6	6.8	102	215
3	12.2	6.6	89	284
Average	11.6	6.6	96	260

Average Estradiol ♦ pmol/L

6.6

Reference Range	
Follicular	2.8-8.8 pmol/L
Peak *	4.5-19.1 pmol/L
Luteal	2.8-8.2 pmol/L
Menopausal	3.7-9.4 pmol/L
Male	3.1-7.4 pmol/L
* Peak = Days 11 and 12	

Testosterone ♦ pmol/L

43

Reference Range	
Premenopausal	34-148 pmol/L
Menopausal	34-148 pmol/L
Male	110-513 pmol/L

Average Estrone pmol/L

11.6

Reference Range	
Menopausal	4.7-18.9 pmol/L

Average Progesterone ♦ pmol/L

260

Reference Range	
Follicular	120-593 pmol/L
Peak *	328-1385 pmol/L
Luteal	145-797 pmol/L
Menopausal	163-669 pmol/L
Male	141-529 pmol/L
* Peak = Days 18 and 20	

Average Estriol pmol/L

96

Reference Range	
Menopausal	<= 133 pmol/L

P/E2 Ratio

39

Reference Range	
Follicular	23-159
Luteal	25-141
Menopausal	33-116



Norms for Estrogens on 6-Day Test

- Estradiol
 - Follicular: 2.8-8.8 pmol/L
 - Peak: 4.5-19.1 pmol/L
 - Luteal: 2.8-8.2 pmol/L
 - Menopausal: 3.7-9.4
- Estrone
 - 4.7-18.9 pmol/L
- Estriol
 - <133 pmol/L



Younger Female Patients Not On HRT: Estradiol

- Cycling women very rarely need estrogen replacement
- The exception to this is menstrual migraines at peri-menopause
- If the patient develops menstrual migraines or if they become more common or much more severe peri-menopausally then start:
 - Biest Cream 0.10 mg as 1mL in Versabase
 - Sig: apply qd to thigh or buttock. Rub in for two minutes. Rotate sites



General Dosing Guidelines

Peri-Menopause

- **Oral** administration of E4M capsules (if issues with insomnia and better breast protection)
 - Progesterone 25 to 200 mg days 14-25
 - May need to give low dose days 4-13
- **Topical** administration
 - Progesterone
 - 10-30 mg days 14-25
 - May need to give low dose on days 4-13



Norms for Progesterone on 6-Day Saliva Test

- Follicular: 120-593 pmol/L
- Peak: 328-1385 pmol/L
- Luteal: 145-797 pmol/L
- Menopausal: 163-669 pmol/L

- Can be given transdermally, PO, or transvaginally
 - Doses are for transdermal and PO



Case #2
Patient Now On HRT

Case #2: Patient on HRT



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Asheville, NC 28801
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Patient: **JANE
DOE**

Order Number:

DOB:

Sex: F

MRN:



One Day Hormone Check - Salivary Profile

Therapeutic Cohort Results

Hormone	Result †	QUINTILE DISTRIBUTION					Therapeutic Range*
		1st	2nd	3rd	4th	5th	
Estradiol (E2)	4.5						2.9-13.7 pmol/L
Estrone (E1)	12.8						5.5-26.1 pmol/L
Estriol (E3)	<70						<=135 pmol/L
Testosterone	34						34-183 pmol/L
Progesterone	295						174-1,417 pmol/L
P/E2 Ratio	66						29-192

* The therapeutic ranges depicted are for informational purposes only, and were derived from a cohort of peri/menopausal women ranging in age from 37-62 years. All women were treated with bioidentical hormone therapy (HT) utilizing combinations of the following: Biest (transdermal); Progesterone (oral micronized); Testosterone (transdermal); and 7-keto-DHEA (oral).

† Patient results with Genova's standard reference ranges are reported on the following pages.



Case #2: Patient on HRT

Salivary Hormone Results

Estradiol ♦ pmol/L	4.5	Testosterone ♦ pmol/L	34																						
<table border="1" style="width: 100%;"><thead><tr><th></th><th>Reference Range</th></tr></thead><tbody><tr><td>Follicular</td><td>2.8-8.8 pmol/L</td></tr><tr><td>Peak *</td><td>4.5-19.1 pmol/L</td></tr><tr><td>Luteal</td><td>2.8-8.2 pmol/L</td></tr><tr><td>Menopausal</td><td>3.7-9.4 pmol/L</td></tr><tr><td>Male</td><td>3.1-7.4 pmol/L</td></tr><tr><td colspan="2">* Peak = Days 11 and 12</td></tr></tbody></table>			Reference Range	Follicular	2.8-8.8 pmol/L	Peak *	4.5-19.1 pmol/L	Luteal	2.8-8.2 pmol/L	Menopausal	3.7-9.4 pmol/L	Male	3.1-7.4 pmol/L	* Peak = Days 11 and 12		<table border="1" style="width: 100%;"><thead><tr><th></th><th>Reference Range</th></tr></thead><tbody><tr><td>Premenopausal</td><td>34-148 pmol/L</td></tr><tr><td>Menopausal</td><td>34-148 pmol/L</td></tr><tr><td>Male</td><td>110-513 pmol/L</td></tr></tbody></table>			Reference Range	Premenopausal	34-148 pmol/L	Menopausal	34-148 pmol/L	Male	110-513 pmol/L
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Menopausal Women





Menopausal Women

For menopausal women a one day saliva test is perfect since her hormones are now stable and are not changing

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One Day Hormone Check - Salivary Profile

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One Day Hormone Check

Salivary Hormone Results

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Asheville, NC 28801
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Patient: JANE DOE ID: Page 3

Salivary Cortisol and DHEA

Cortisol •

Reference Range

1 Hour After Rising

7AM - 9AM: 0.27-1.18 mcg/dL

11AM - 1PM: 0.10-0.41 mcg/dL

3PM - 5PM: 0.05-0.27 mcg/dL

10PM - 12AM: 0.03-0.14 mcg/dL

Hormone

Hormone	Reference Range
DHEA 7am - 9am	71-640 pg/mL
DHEA Cortisol Ratio/10,000	115-1,155

Salivary Melatonin

Reference Range

7AM - 9AM: <=10.50 pg/mL

3PM - 5PM: <=0.88 pg/mL

2:30AM - 3:30AM: 2.53-30.67 pg/mL

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Case #3

**Menopausal Woman
One Day Saliva Test**



Case #3: One Day Test



63 Zillicoa Street
Asheville, NC 28801
© Genova Diagnostics



Patient: **JANE
DOE**

Order Number:

DOB:
Sex: F
MRN:

One Day Hormone Check - Salivary Profile

Therapeutic Cohort Results

Hormone	Result †	QUINTILE DISTRIBUTION					Therapeutic Range*
		1st	2nd	3rd	4th	5th	
Estradiol (E2)	2.9						2.9-13.7 pmol/L
Estrone (E1)	7.3						5.5-26.1 pmol/L
Estriol (E3)	114						<=135 pmol/L
Testosterone	<30						34-183 pmol/L
Progesterone	179						174-1,417 pmol/L
P/E2 Ratio	62						29-192

* The therapeutic ranges depicted are for informational purposes only, and were derived from a cohort of peri/menopausal women ranging in age from 37-62 years. All women were treated with bioidentical hormone therapy (HT) utilizing combinations of the following: Biest (transdermal); Progesterone (oral micronized); Testosterone (transdermal); and 7-keto-DHEA (oral).

† Patient results with Genova's standard reference ranges are reported on the following pages.



Case #3: One Day Test

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DHEA

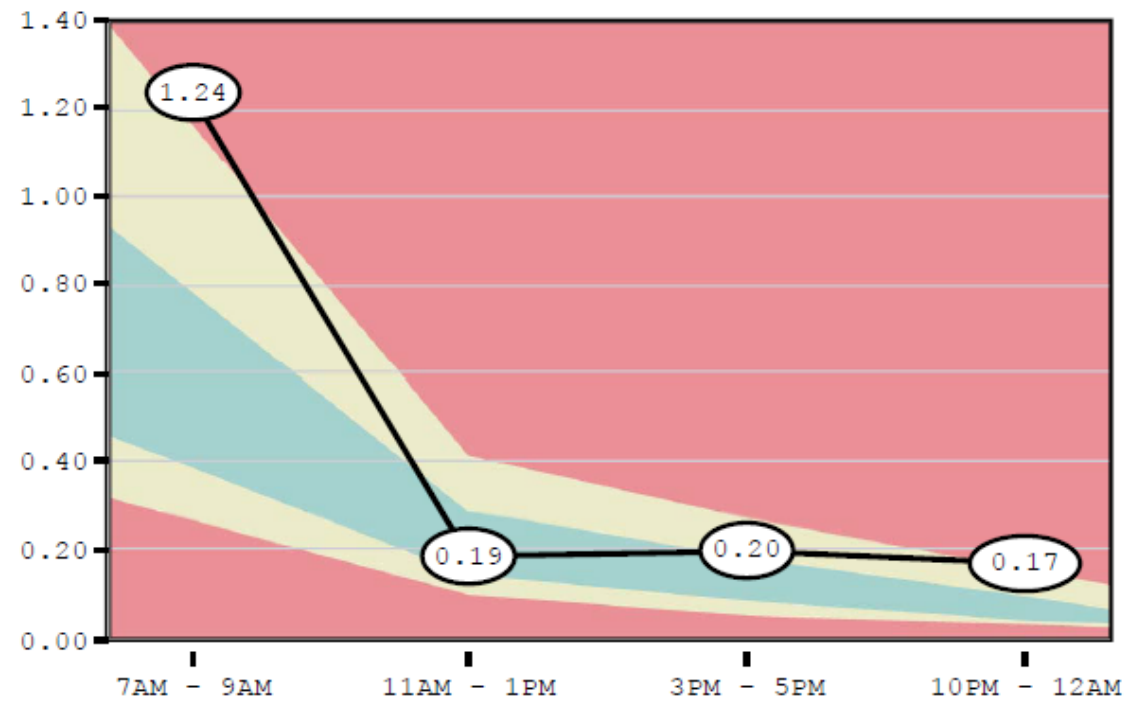


Case #3: One Day Test

ID:

Page 2

Salivary Cortisol and DHEA



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 10PM - 12AM:
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Hormone	Reference Range
DHEA 7am - 9am	71-640 pg/mL
DHEA: Cortisol Ratio/10,000	115-1,188



DHEA Replacement

- DHEA should be in the middle of the green section for optimal health
- Normal DHEA: 71-640 pg/mL
- Women are much more sensitive to DHEA than men, so start with low dosages
- In younger women you may not need to replace DHEA since the cause of low DHEA is usually due to stress. Balance cortisol and the DHEA level will rise



Clinical Pearl on DHEA

- DHEA balances cortisol
- If cortisol levels are abnormal then treat, do not just give DHEA hoping that cortisol levels will come up
- If cortisol is abnormal and you just give DHEA without working on the abnormal cortisol levels then the next time that you measure DHEA, the levels will be even lower



Cortisol

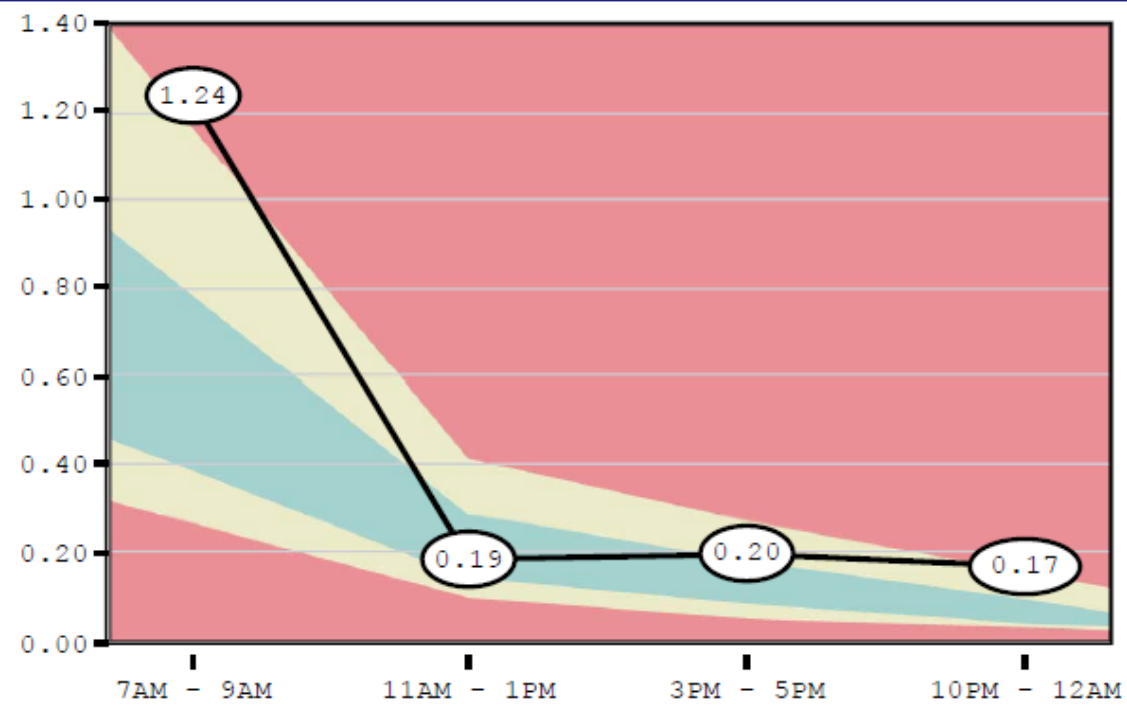


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Treatment of Hyperadrenalism

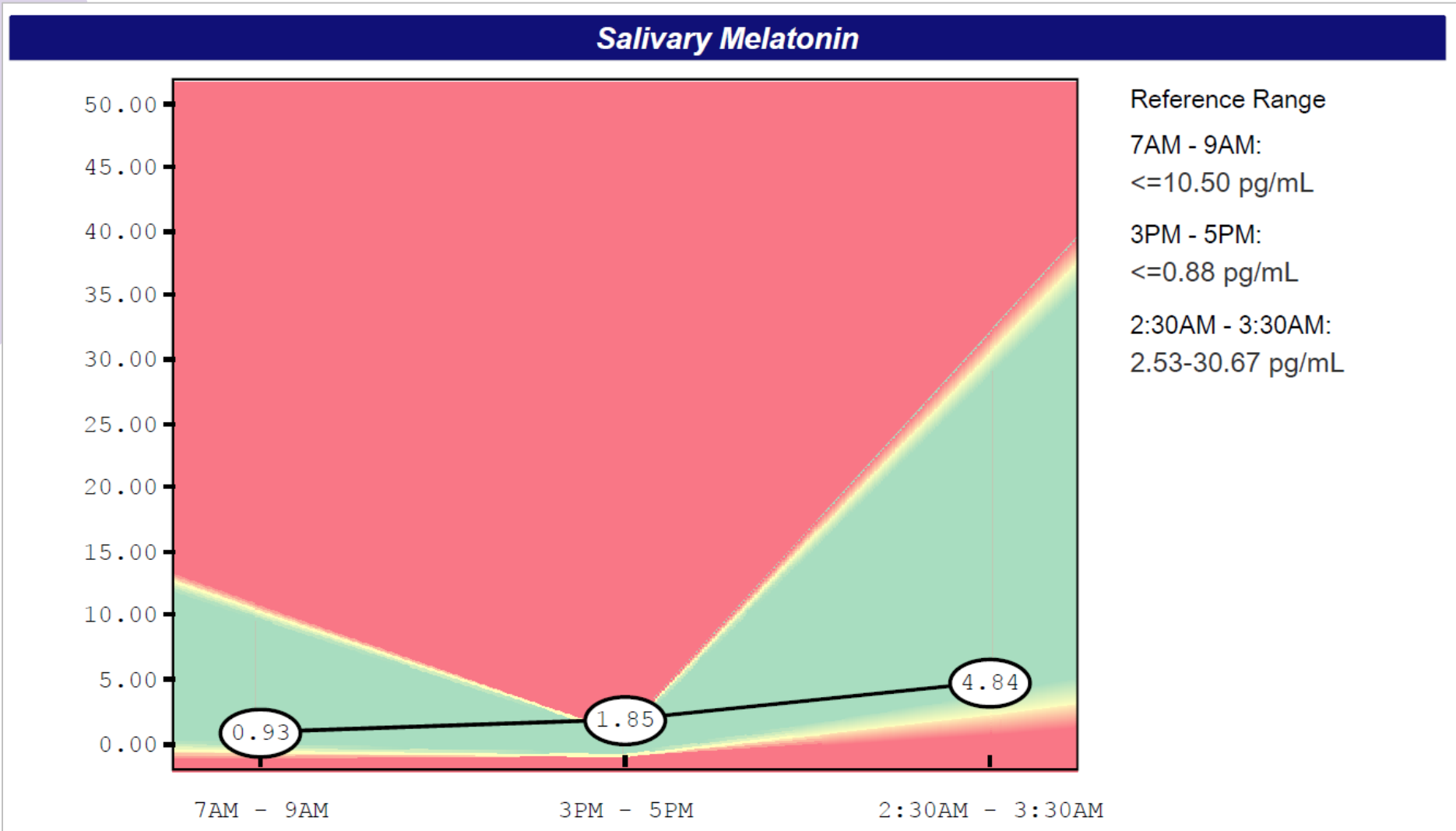
- Replacement of DHEA with adrenal support
- Adaptogenic herbs
- Essential Nutrients
- Calming herbs
- Stress reduction techniques
- If cortisol is high in the evening then add phosphatidylserine 300 mg which may be taken any time of the day



Melatonin



Case #3: One Day Test





Melatonin Replacement in Women

- High levels of melatonin in the morning usually mean that cortisol levels were too low in the am
- If melatonin levels are to high any time of the day or night then serotonin levels may go down
- Middle of the night level is done with the lights off otherwise the reading will not be accurate



Moderator:
Michael Chapman, ND



Presenter:
Pamela W. Smith, M.D., MPH, MS

Explore
WWW.GDX.NET

*for more information and
educational resources, including...*

LEARN GDX – Brief video modules

LIVE GDX – Previous webinar recordings

GI University – Focused learning modules

Conferences – Schedule of events we attend

Test Menu – Detailed test profile information

MY GDX – Order materials and get results

Questions?



Additional Education Materials:

WWW.GDX.NET

Sample Reports,
Support Guides,
Kit Instructions, FAQs,
Payment Options, and
much more!

The screenshot shows the Genova Diagnostics website interface. At the top, there is a navigation bar with the Genova Diagnostics logo on the left and links for 'HOME', 'CLINICIANS', and 'PATIENTS' on the right. The 'CLINICIANS' link is circled in red. Below the navigation bar is a banner for 'NutrEval® with Genomics' featuring a man and a woman in a kitchen. A 'LEARN MORE' button is present in the banner. Below the banner are three main content blocks: 'Getting Started' with a 'NEW USERS' button, 'Test Menu' with a 'SEARCH TESTS' button, and 'MYGDX Login' with a 'LOG IN' button circled in red. At the bottom, there is an 'Online Education' section with a 'LEARN NOW' button circled in red.

LearnGDX Seminar Series

- *One-day event on June 11th, 2016*
- *Located in Fort Lauderdale, FL*
- *Speakers include Dr. Pamela Smith & Dr. Andrea Girman*
- *Open to all account holders for \$299*
- *Registration includes a Menopause Plus Salivary Profile*

LearnGDX Seminar Series

MANAGING THE (PERI)MENOPAUSAL PATIENT: DIAGNOSTICS AND THERAPEUTICS

Saturday, June 11, 2016
Fort Lauderdale, Florida



An educational workshop focusing on the comprehensive clinical management of the (peri)menopausal patient including: salivary hormone assessment, related functional lab testing, disease risk, and personalized therapy protocols.

Although a time of natural transition, the "change of life" can cause shifting hormone levels associated with a continuum of physiologic and metabolic changes that can produce troubling symptoms and risk for more serious health conditions. Specialized laboratory diagnostics provide insight into these changes and offer guidelines for personalized clinical support. Identification of imbalances and their treatment with customized hormone therapy, targeted nutritional supplementation, and dietary/lifestyle changes can help improve symptoms, reduce disease risk, and enhance quality of life.

Join us for a day of expert discussion on clinical strategies to effectively support patients as they transition to a "new normal".

SPEAKERS INCLUDE:



Pamela W. Smith, MD, MPH, MS
Teacher, author, and recognized Anti-Aging/Metabolic Medicine specialist



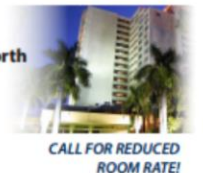
Andrea Girman, MD, MPH
Director of Medical Education
Genova Diagnostics

EVENT SCHEDULE

8:30-9:00:	Introduction/Event Overview
9:00-10:30:	A Comprehensive Assessment of the (Peri)Menopausal Patient (Pamela W. Smith)
10:30-10:45:	Snack / Break
10:45-12:00:	Menopause Plus™ Report & Therapeutic Range Cover Page Review (Andrea Girman)
12:00-1:00:	LUNCH (Provided)
1:00-3:15:	Therapeutic Protocol and Interactive Case Study Review (Pamela W. Smith)
3:15-3:30:	Break
3:30-4:30:	Strategies for Incorporating Specialty Diagnostics into Clinical Practice (Pamela W. Smith, Genova Diagnostics Team)

EVENT LOCATION:

Fort Lauderdale Marriott North
6650 N. Andrews Ave.
Fort Lauderdale, FL 33309
(954) 771-0440



CALL FOR REDUCED ROOM RATE!

Register Now!

Cost: ~~\$299~~ Early Bird Special: \$249*

www.gdx.net/SeminarSeries

Included in Your Registration Package...

Menopause Plus Salivary Profile**

* Early Bird pricing good through April 30th, 2016

** You will need to have a valid account established with Genova Diagnostics to receive a Menopause Plus Salivary Profile as part of your registration package.



Additional Questions?

US Client Services: 800-522-4762

UK Client Services: 020.8336.7750

Please schedule a complimentary appointment with one of our Medical Education Specialists for questions related to:

- Diagnostic profiles featured in this webinar
- How Genova's profiles might support patients in your clinical practice
- Review a profile that has already been completed on one of your patients

We look forward to hearing from you!



Upcoming ^{LIVE} GDX Webinar Topics

June 2016

*– The Steroidogenic Pathway:
Understanding What Influences Each Step*

- Ellen Antoine, DO

Register for upcoming ^{LIVE} GDX Webinars online at WWW.GDX.NET

The views and opinions expressed herein are solely those of the presenter and do not necessarily represent those of Genova Diagnostics. Thus, Genova Diagnostics does not accept liability for consequences of any actions taken on the basis of the information provided.





Case Studies in Management of the Menopausal Patient

Pamela W. Smith, M.D., MPH, MS

May 25, 2016



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