

The mystery of labs and transdermal creams/gels

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Transdermal Estrogen

- Monitored best with serum or urine (DUTCH)

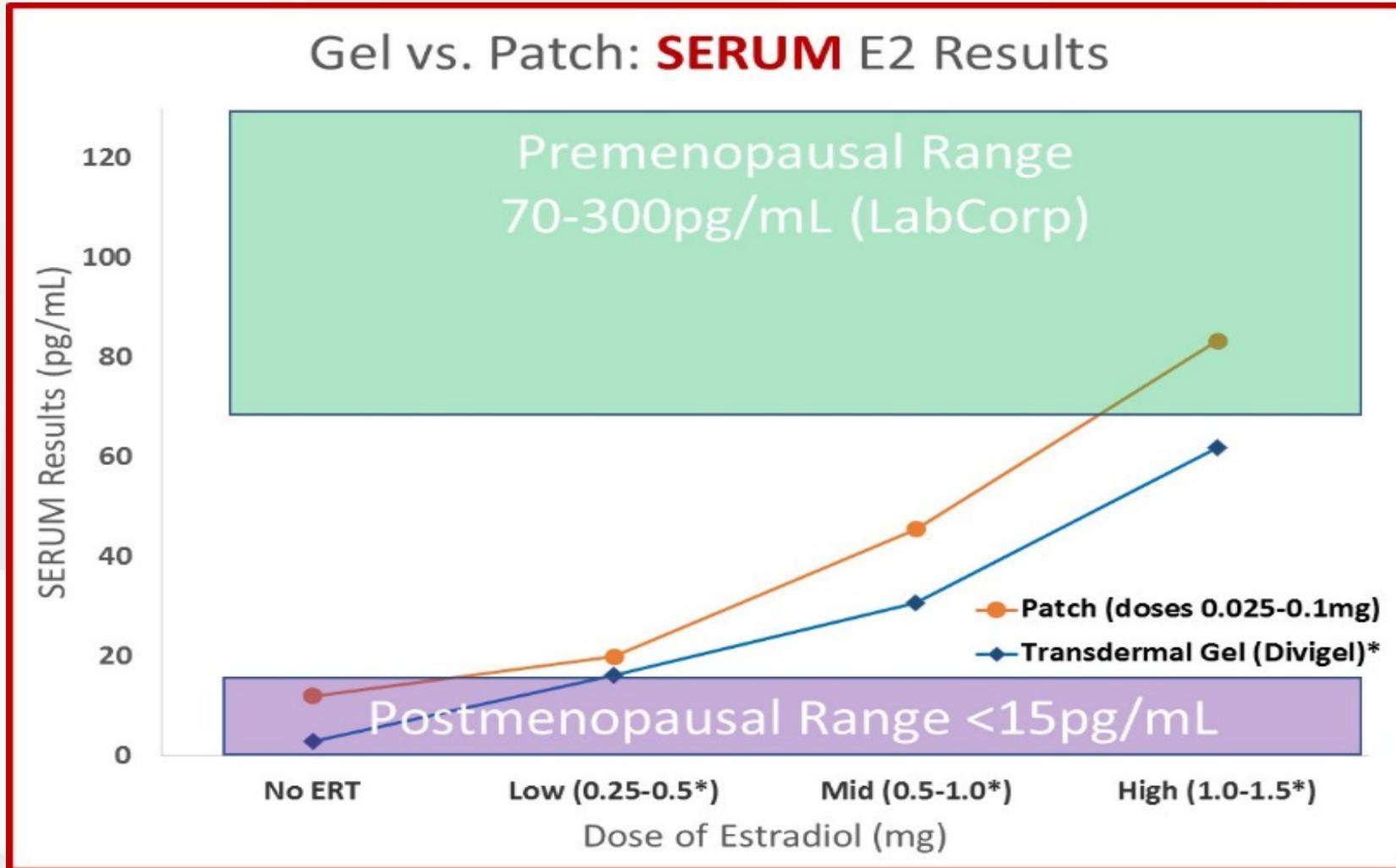
Transdermal Progesterone

- Monitored best with clinical symptoms only

My False Assumptions

- You must get back to premenopausal levels
- Serum and urine estrogen levels don't go up with creams and gels – YES THEY DO!
- Saliva speaks for ALL tissue – NO IT DOESN'T!
- Estrogen and progesterone behave the same

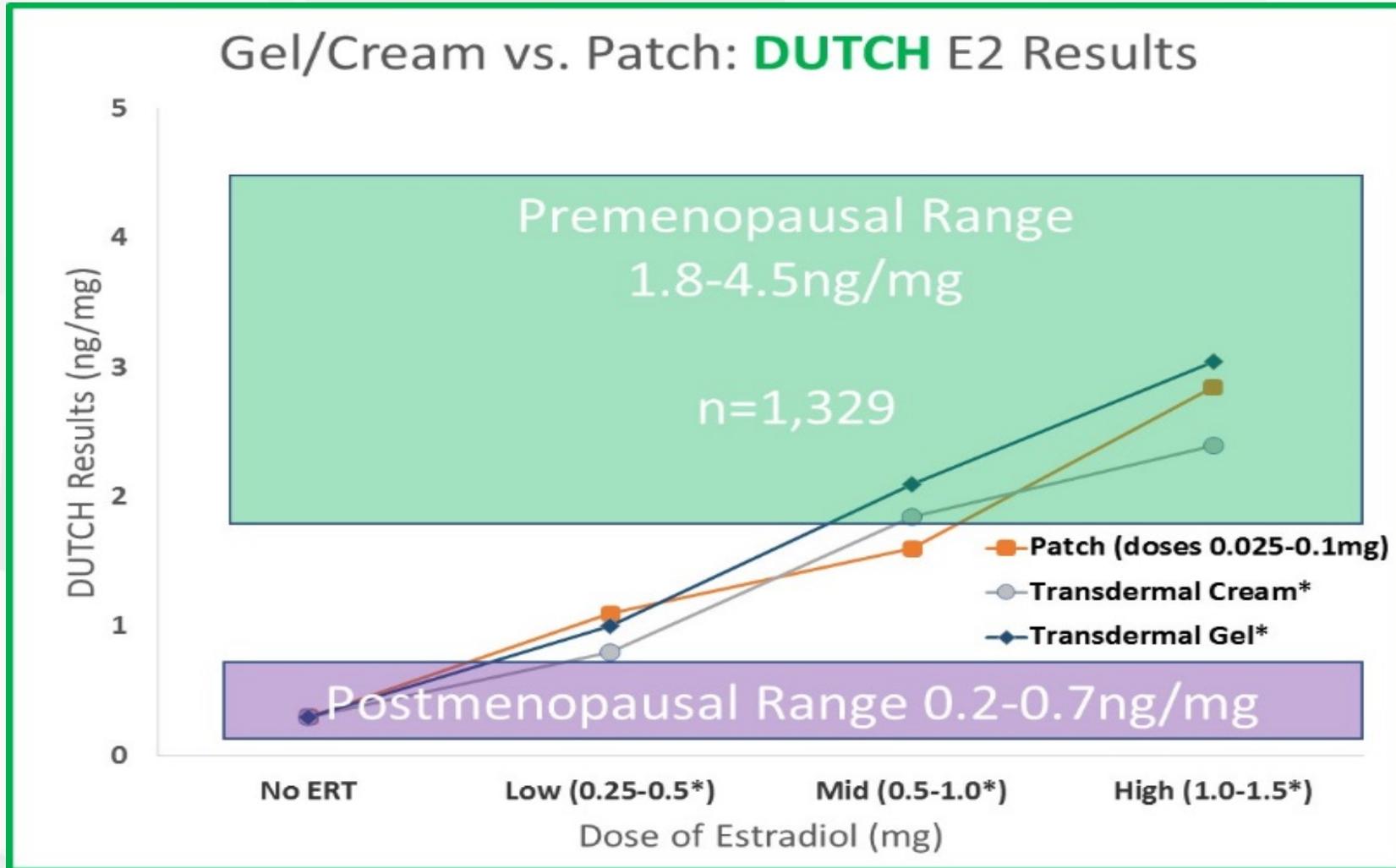
Start with Patches



With E2 Patches...

- Serum & Urine move from “low” to “normal”
- Bone loss & hot flashes improved at low (0.025mg) and high (0.1mg) doses
- FSH is suppressed ~40% with moderate dose

Transdermal Estradiol



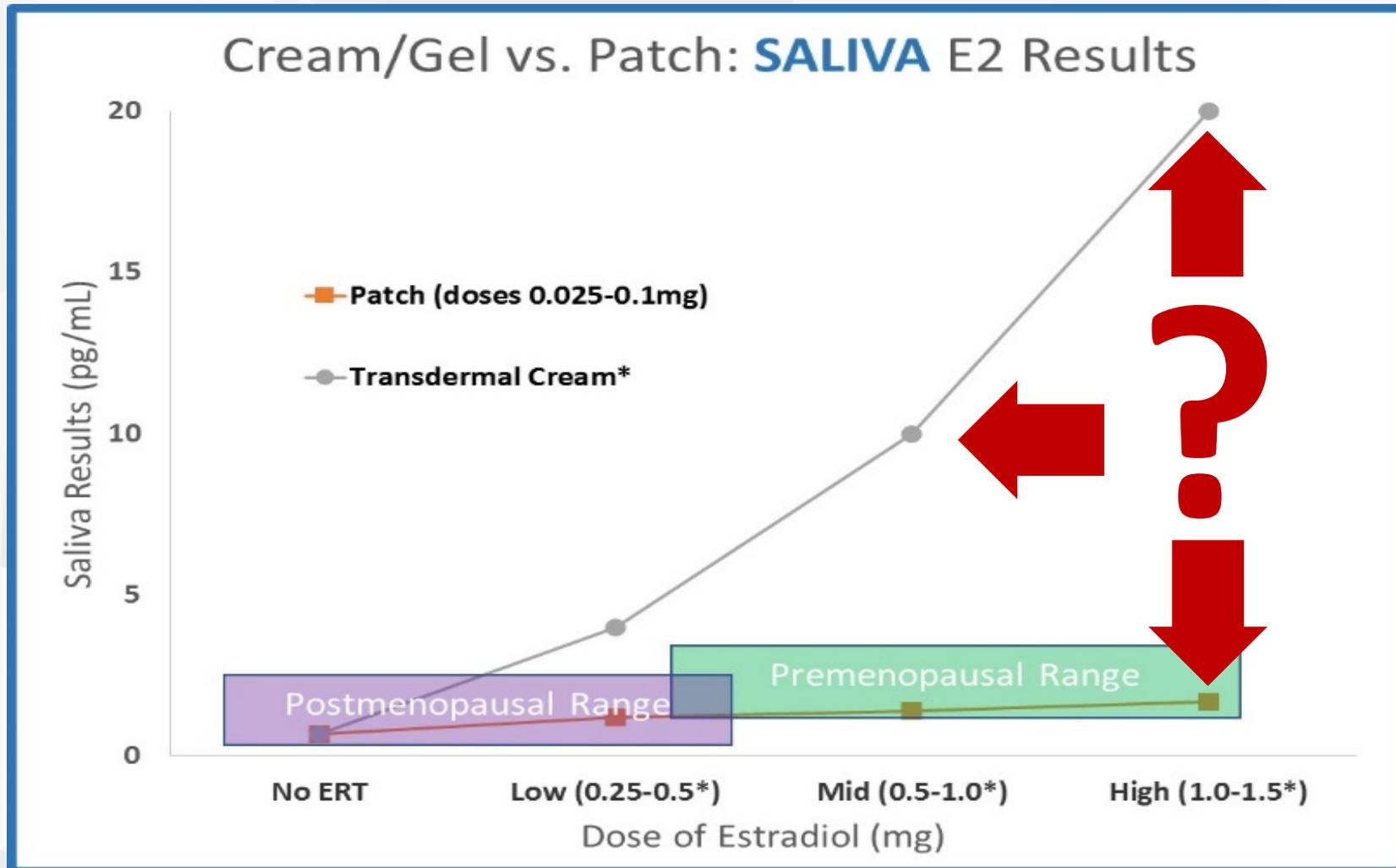
With E2 Creams/Gels...

- Serum & Urine move from “low” to “normal”
- Bone loss & hot flashes improved at moderate (0.5-1.0mg) and high (1.0-1.5mg) doses
- Bone loss & hot flashes take extra time to improve with lower doses (0.25-0.5mg)
- FSH is suppressed ~40% with moderate dose

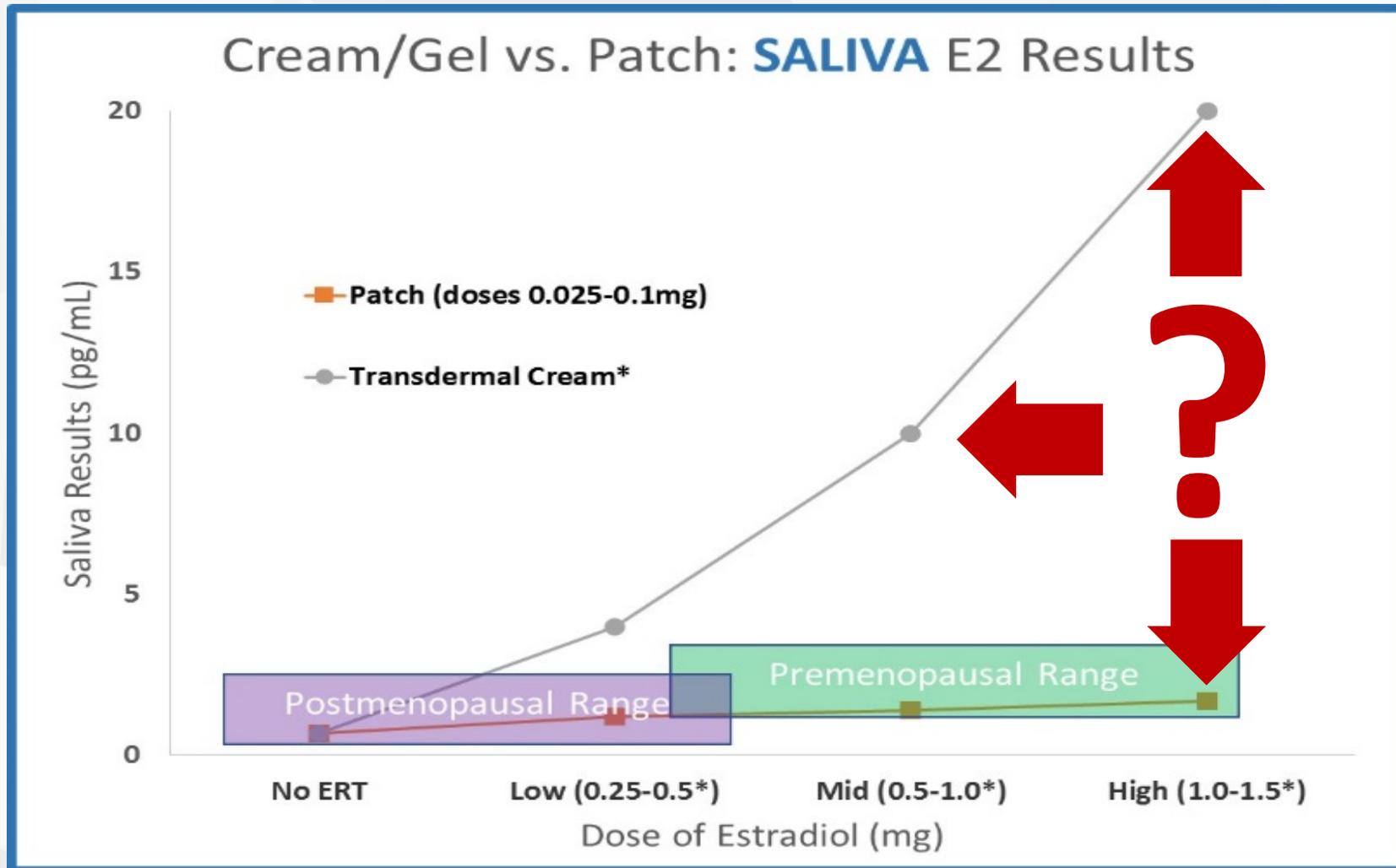
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Saliva says 0.25mg is a high dose



Is 1mg 20X more than a patch?

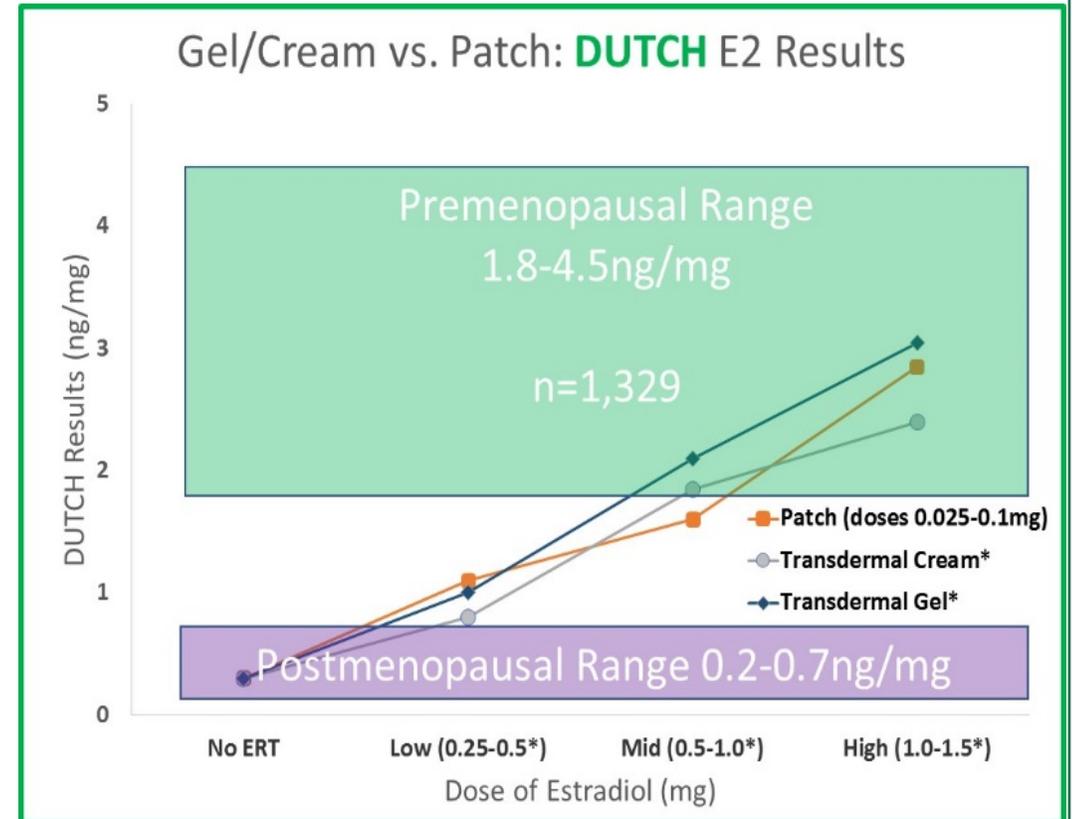


What do we learn from saliva?

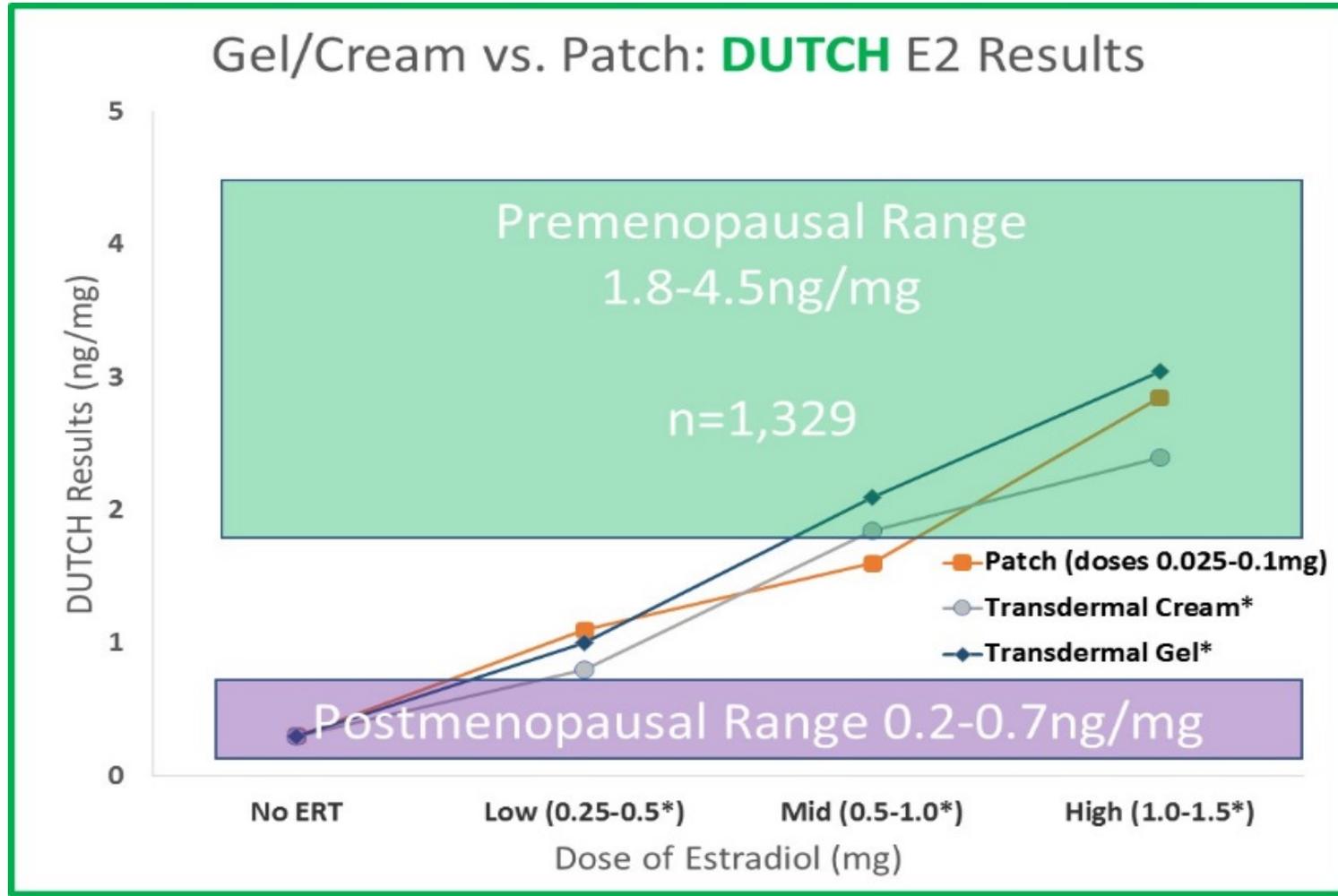
- Some tissue get more than what serum or urine show
- Tissue closer to the application site get more hormone
 - E2/Pg on the neck & saliva will be VERY high
 - Progesterone on the breast gives breast tissue a lot of progesterone
 - Estrogen and estrogen-sensitive tissue?

How do we dose TD Estrogen?

- Safely and effectively!
- Generally, lower is safer
But is it effective?
- Metabolite testing can improve safety profiles



How do we dose TD Estrogen?

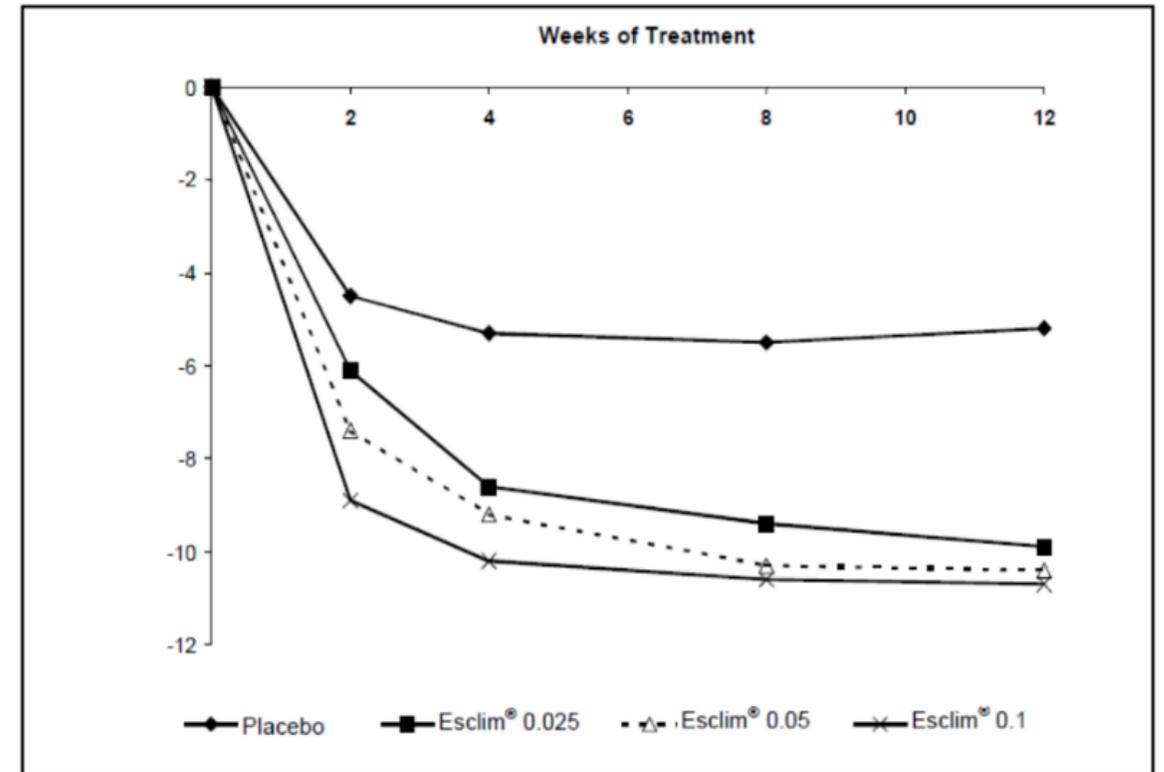


How do we dose TD Estrogen?

- Start low, go slow
- Give it some time
- Don't forget placebo!

- Balance with Prog.

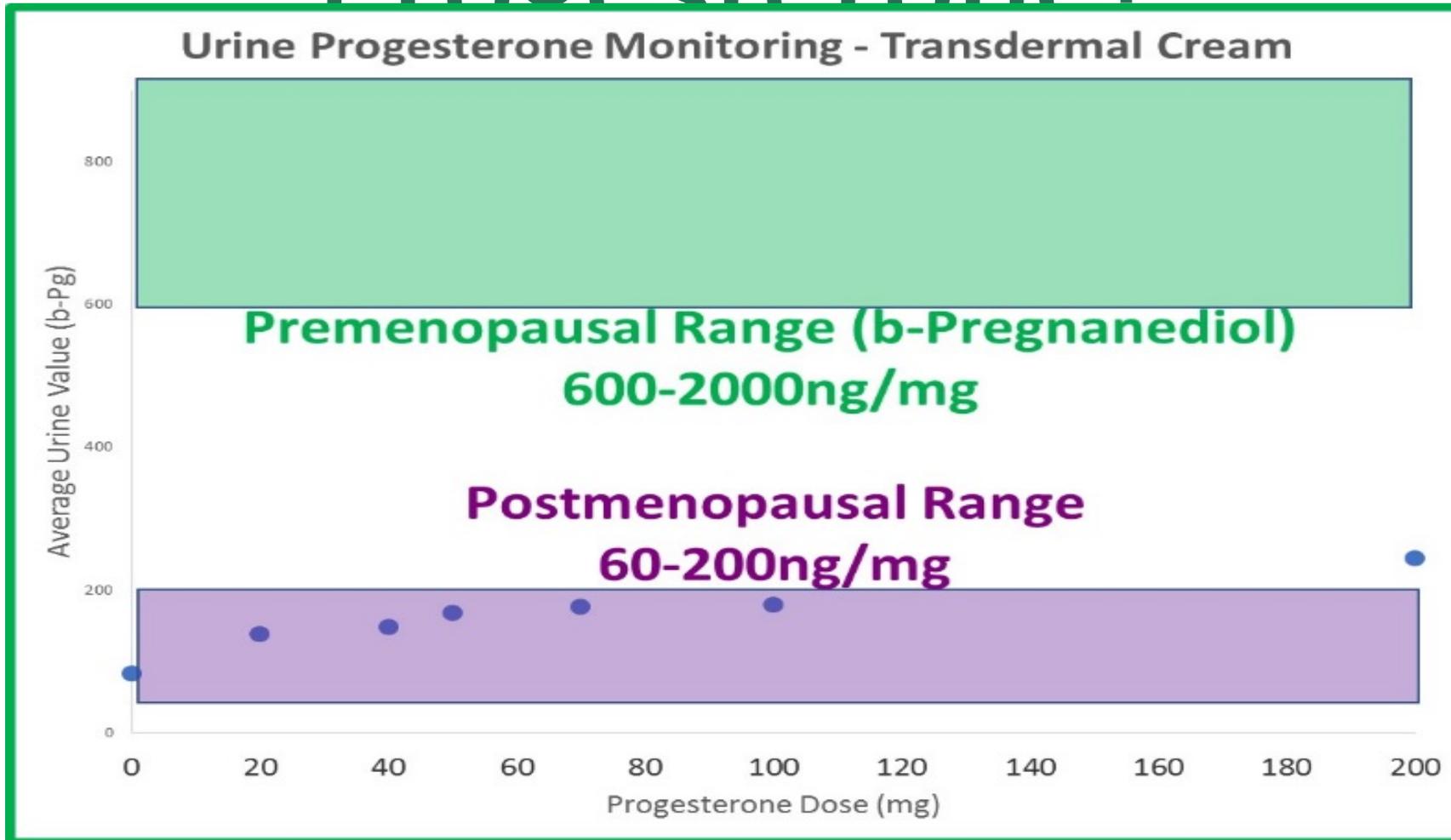
Reduction of MSVS During Double-Blind, Placebo-Controlled Study



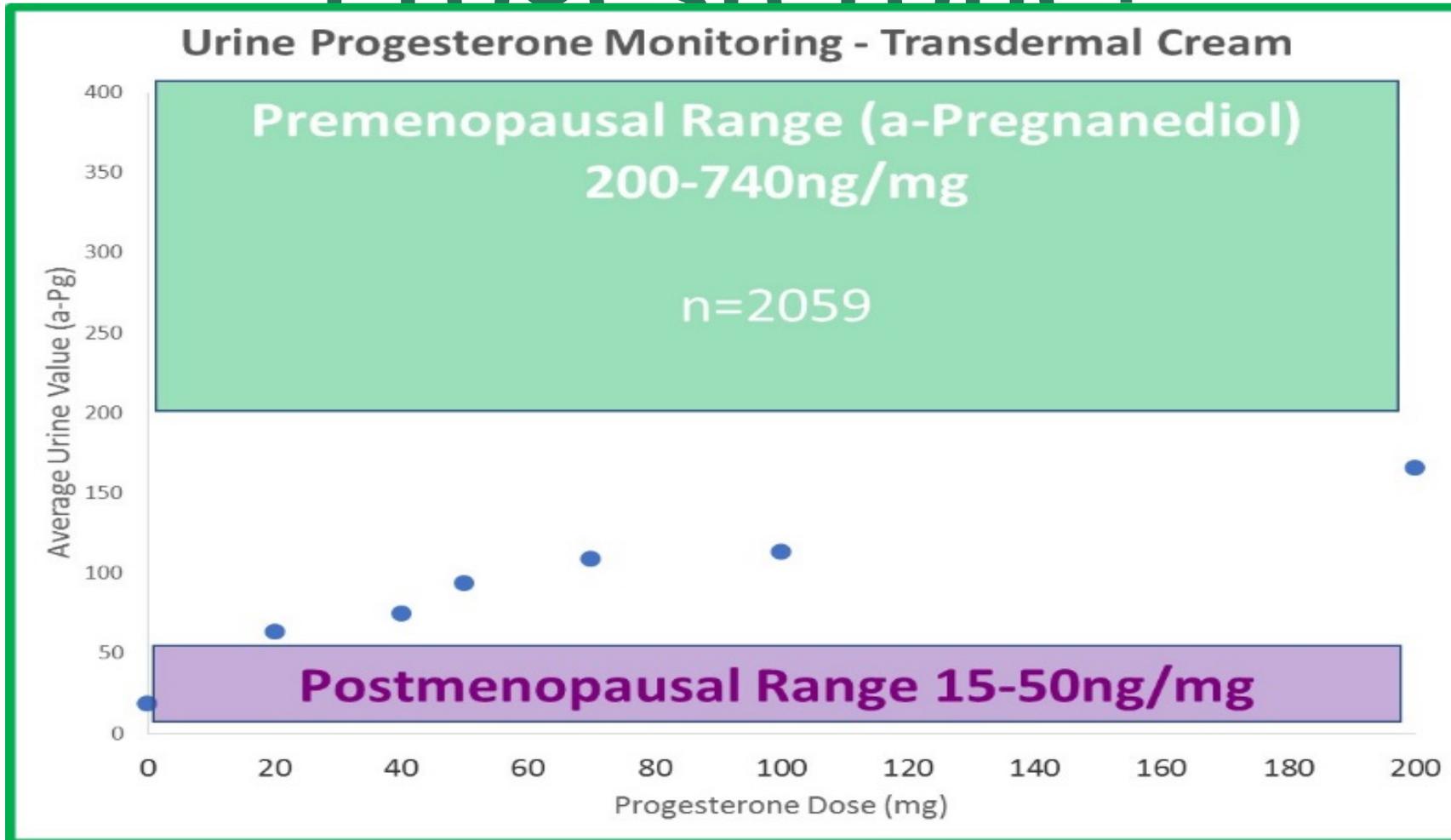
NDA 20, 847 (ESCLIM® estradiol transdermal system) Physician Package Insert

Transdermal Progesterone
doses may not be
effectively monitored with
any available lab testing

How do we dose TD Progesterone?



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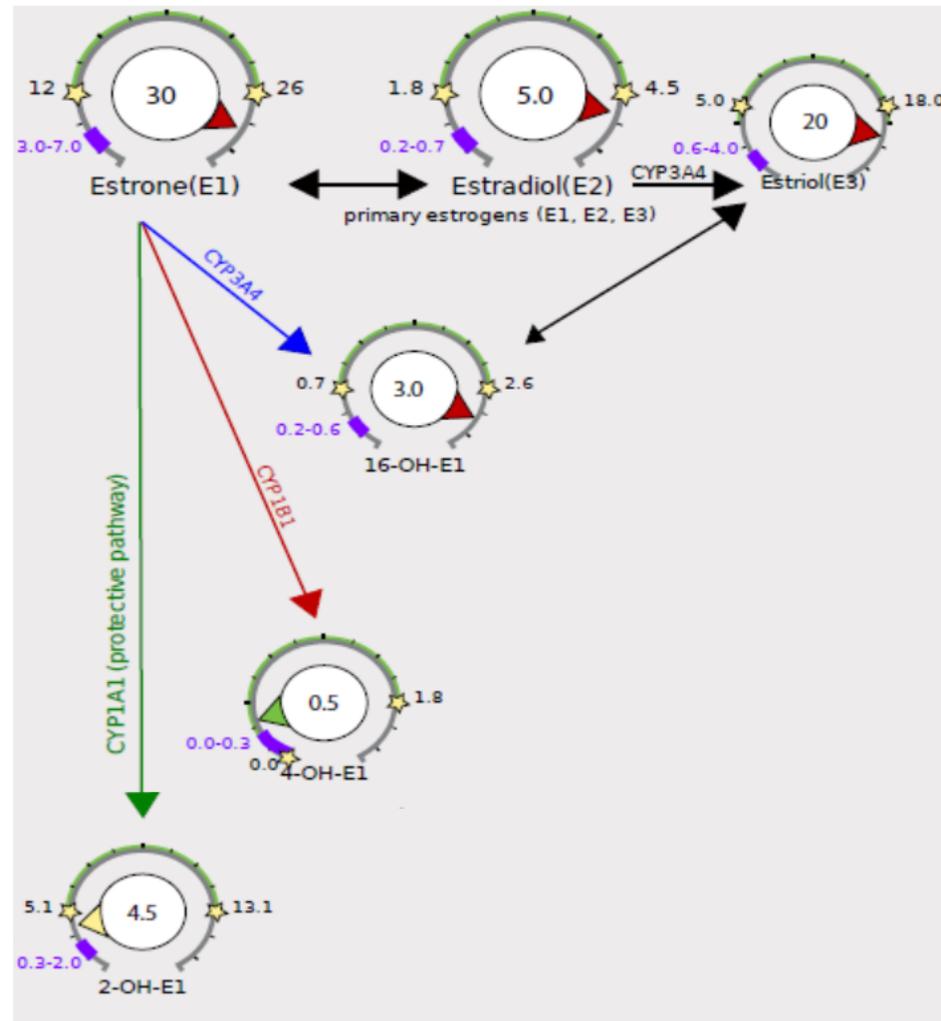
My New Assumptions

- You want out of postmenopausal ranges
- Serum and urine levels parallel clinical effects
- Saliva does not help with dosage monitoring
- Transdermal progesterone may not be the best option when estrogen HRT is on board

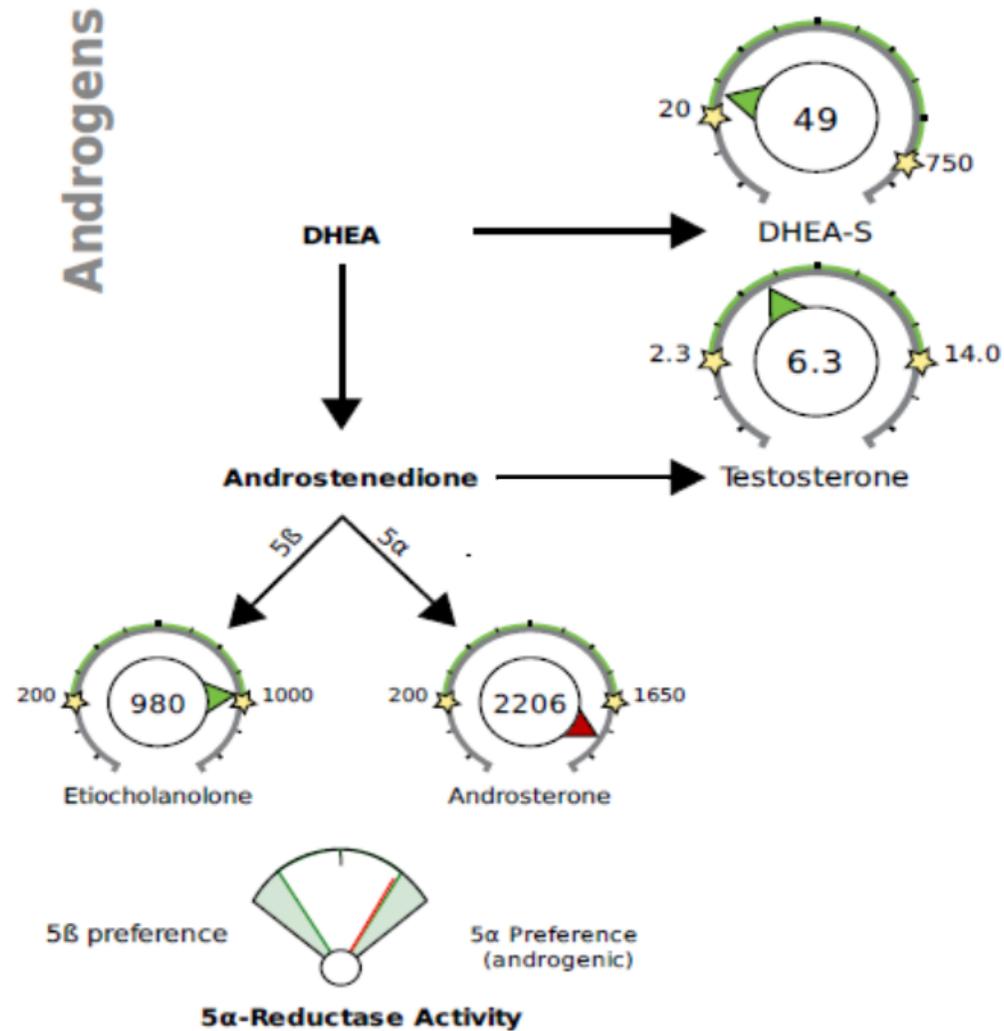
Why DUTCH?

- All day average is better than one point in time
- Metabolites, metabolites, metabolites
- Expanded tests: Cortisol, Androgens, OATs, etc.

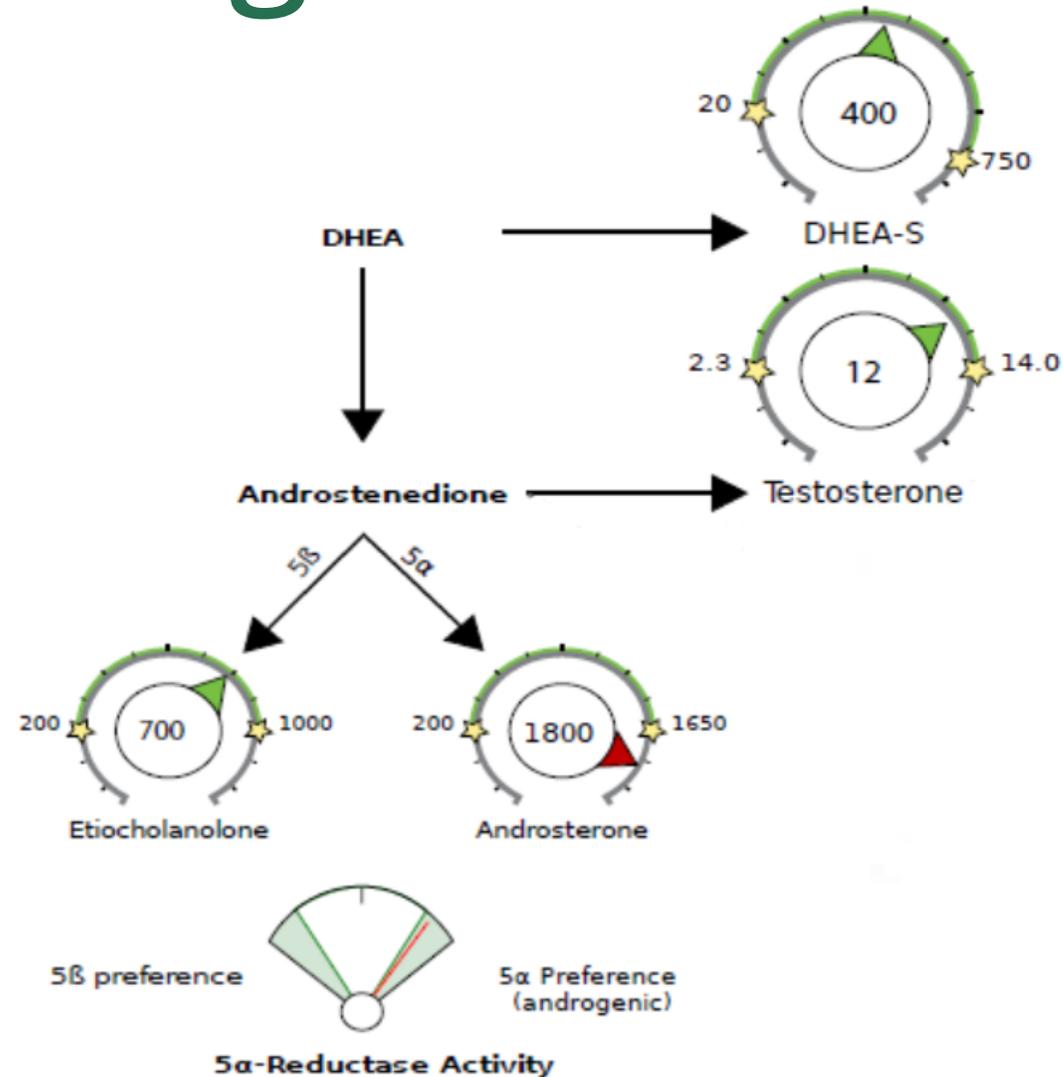
Estrogen Metabolites



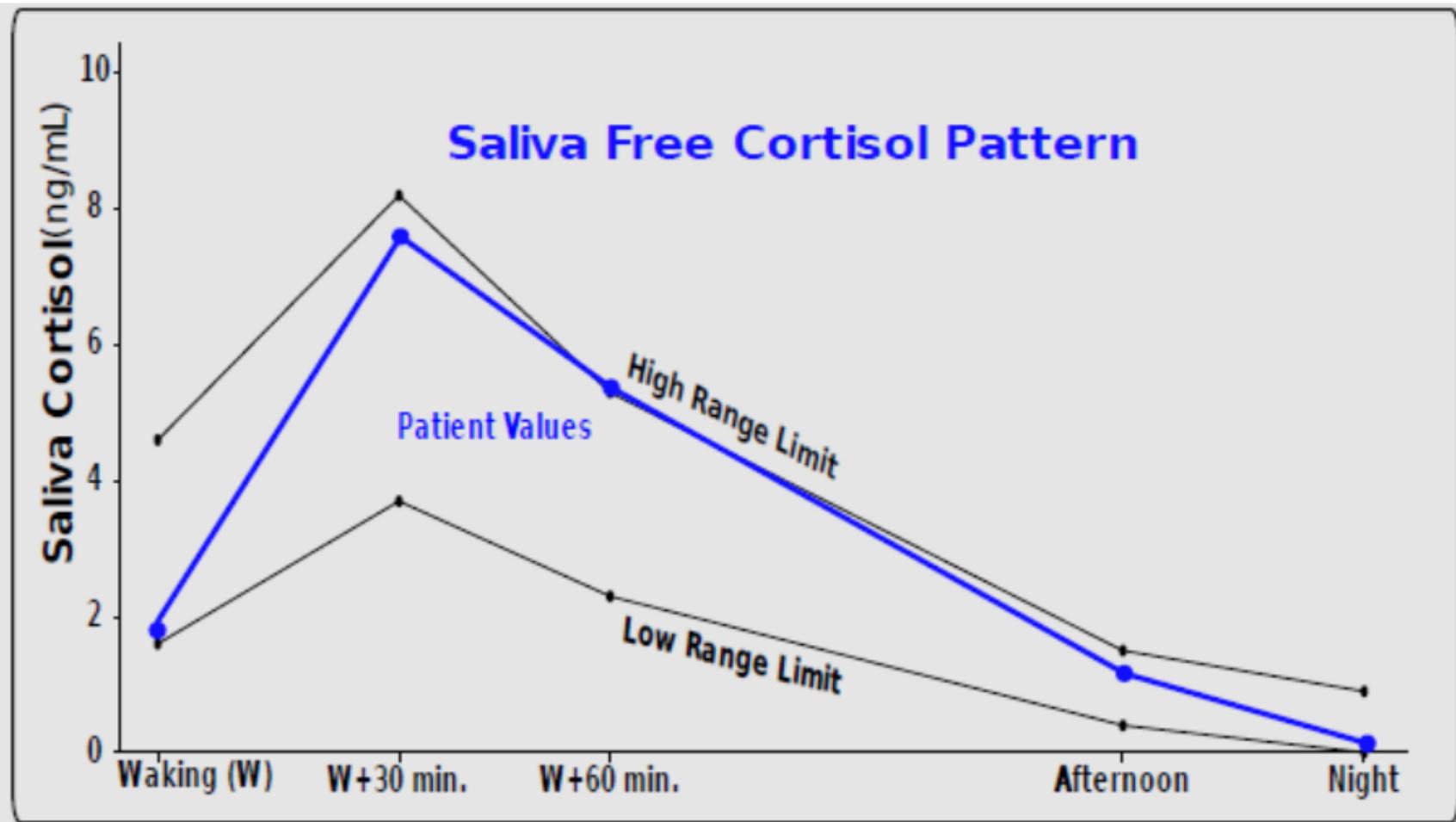
Androgen Metabolites



Androgen Metabolites



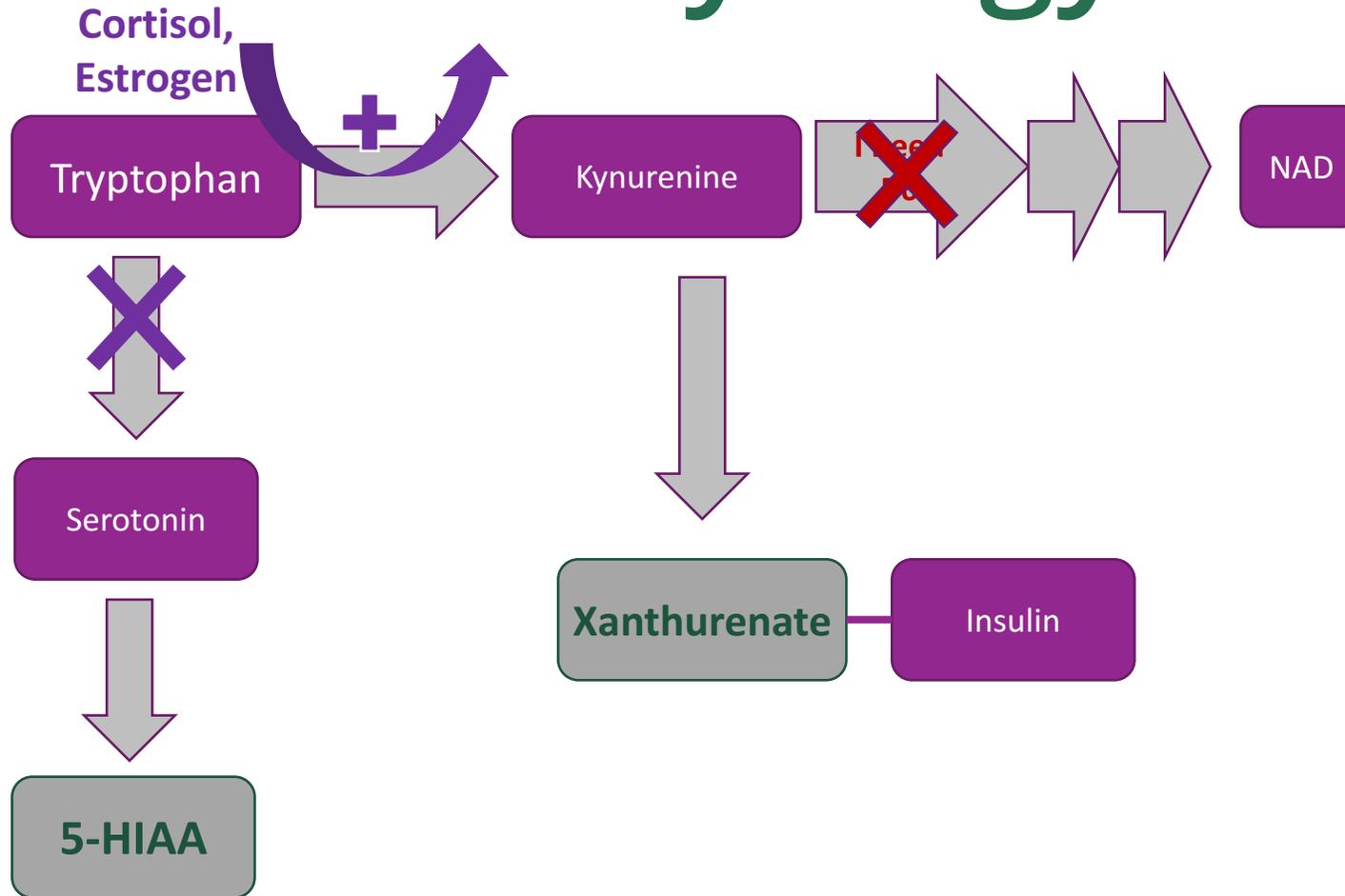
Cortisol



DUTCH Extras

DUTCH Extras					
Category	Test		Result	Units	Normal Range
Melatonin (*measured as 6-OH-Melatonin-Sulfate) - (Urine)					
	Melatonin* (Waking)	Low end of range	18.2	ng/mg	10 - 85
Oxidative Stress / DNA Damage, measured as 8-Hydroxy-2-deoxyguanosine (8-OHdG) - (Urine)					
	8-OHdG (Waking)	High end of range	4.0	ng/mg	0 - 5.2
Nutritional Organic Acids					
Vitamin B12 Marker (may be deficient if high) - (Urine)					
	Methylmalonate (MMA)	Above range	3.2	ug/mg	0 - 2.8
Vitamin B6 Marker (may be deficient if high) - (Urine)					
	Xanthurenate	Above range	2.1	ug/mg	0 - 1.6
Glutathione Marker (may be deficient if low or high) - (Urine)					
	Pyroglutamate	Within range	50	ug/mg	37 - 70
Neurotransmitter Metabolites					
Dopamine Metabolite - (Urine)					
	Homovanillate (HVA)	Within range	11.0	ug/mg	4.5 - 13
Norepinephrine/Epinephrine Metabolite - (Urine)					
	Vanilmandelate (VMA)	High end of range	6.2	ug/mg	2.7 - 6.4
Serotonin Metabolite - (Urine)					
	5-Hydroxyindoleacetate (5HIAA)	Below range	2.1	ug/mg	3 - 7.5

Hormone synergy with OATs



Thanks for listening!

Questions??

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