4.11. 2009 Supplement and Prescription Medicine Schedule for Veltmann - NIH Breast Cancer + Estrogen Research Study

Possible Test Results are

No SNP SNP = Single Nucleotide Polymorphism

1 SNP

2 SNPs (You inherit one chromosome from each parent)

ABSENT Absent is not Good

3.24.2009 TEST RESULTS	GENE	SNP ON GENE RESULTS	SUPPLEMENT ACTION	
	GENOMIC TEST: PHASE I DETOXIFICATION - CYTOCHROME P- 450 ENZYME SYSTEM			
The CYTOCHROME P-450 enzymes (Phase I detoxification) use oxygen to modify toxic compounds, drugs or steroids. Decreased Phase I clearance will cause toxic accumulation in the body. Increased Phase I Clearance without increased Phase II clearance can lead to the formation of toxic intermediates that may be more toxic than original toxic. *(In other words, if you have more SNPs in the Phase II test (which I do), it is bad.)*				
2 SNPs	CYP1B1	Cytochrome P450 1B1 converts estrogen to 4-hydroxy estrogen. A SNP on CYP1B1 increases risk of estrogen sensitive cancer. Hyper induction can generate oxidative stress and the 4-hydroxyestrogens may convert to quinone compounds that can cause DNA damage in breast tissue.	DHEA	Down regulates CYP1B1
No SNP	CYP1A1	Detoxifies polycyclic aromatic hydrocarbons (PAHs); i.e. exhaust fumes.	DIM-Pro	Upregulates CYP1A1
	GENOMIC TEST: PHASE II DETOXIFICATION - CONJUGATION OF TOXINS AND ELIMINATION			
In Phase II detoxification the body modifies reactions formed by Phase I Detox. Transformed toxins are eliminated in urine of feces. *(In my case, since CYP1B1 is impaired as are COMT and GSTMs, the fertility drugs were not transformed and eliminated through urine.)*				
	METHYLATION			
2 SNPs	COMT	COMT enzyme breaks down neurotransmitters dopamine, epinephrine and norepinephrine. SNP's on COMT associated with increased breast cancer risk and lymph node metastasis. This risk increases 4-5 times with 2 'bad' COMT genes or in combination with SNPs on CYP1B1, GSTM1, GSTP1. GSTT1.	SAM-E	COMT catalyst, decreases flight/fight response
	GLUTATHIONE CONJUGATION			
ABSENT 1 SNP	GSTM1 GSTP1	The GST isoforms catalyze the conjugation of electrophilic compounds with glutathione. Defects in GST activity can contribute to fatigue syndromes and to various cancers.	NAC	GSTM1, GSTP1, SOD2
	OXIDATIVE PROTECTION			
2 SNPs	SOD2	SOD2 is an enzyme that protects cells from increased oxidative stress and free radical damage to cell structures like membranes, DNA and proteins.	Vitamin E	GSTM1, GSTP1, SOD2
	ACETYLATION - FAST & SLOW METABOLIZER POLYMORPHISM			
2 SNPs	NAT2	SNPs on NAT are at increased risk for lung, colon, bladder & head or neck cancer.	Quercitin	Modulates IL-13, NAT2

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GENOMIC TEST: IMMUNE MARKERS

CHRONIC INFLAMMATION

2 SNPs	IL-1B	Interleukin 1-beta mediates the hose inlfammatory reactions known as acute phase response. SNPs in IL-1B predisposes the nody to chronic inflammatory conditions.	Milk Thistle	Suppresses IL-1B, SOD2, GSTP1, GSTM1
1 SNPs	IL-6	Interleukin-6 contributes to inflammatory response. A SNP on IL-6 is associated with elevated tri-glycerides.	EPA/DHA (O Sterol 117 (P	Suppresses IL-1B, Modulates IL-13, SOD2 Suppresses IL-6
1 SNPs	IL-10	Interleukin-10 has an inhibitory effect of TH-1 cytokine productions. SNPs on IL-10 may affect risk of cancer and auto-immune diseases.	Curcumin (Tı	Suppresses IL-1B, Modulates IL-10, SOD2
1 SNPs	IL-13	Interleukin-13 acts to promote IgE synthesis and IgE-based mucosal inflammation typical of atopy and asthma.	Ester C	Modulates IL-13, IL-10, GSTM1, GSTP1, SOD2