Missed Opportunities in Cancer Prevention and Treatment

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Our Place in the Food Chain

• Algae, fungi, “germs”, viruses and bacteria are at the bottom of the food chain
• Note what they share in common: features such as selenium dependent enzyme systems, production of essential fatty acids, including the omega-3s—all exist at the bottom of the food chain
Quote

“.....Nature isn't benign.....The survival of the human species is not a pre-ordained evolutionary program.... genetic variation exist[s].... not necessarily confined to what happens routinely, or even frequently.... It is, I think, worthwhile being conscious of the limits of our powers..... We are caught in the food chain, whether we like it or not, eating and being eaten..” -The Coming Plague Laurie Garrett
Where do we start?

- Finding the “Silver bullet” to cure cancer?
- Or is this the wrong approach.
- “despite the $US20 billion spent since Nixon launched his war [on cancer] in 1971, there has been little, if any, improvements in the treatment or survival rate for most common cancers: 'The cancer establishment remains myopically fixated on damage control-diagnosis and treatment- and basic genetic research, with, not always benign indifference to cancer prevention....
• Of the 1976 cancer research budget of $US 51.4 million, just $US1 million was spent on research into carcinogens...”

• Prof. Sam Epstein *The Politics of Cancer revisited.*

• Alternatives?

• I await Prof. Avni Sali's talk with keen anticipation
“Risk factors for breast cancer are various. See table 2. *[Does not include diet, supplements or chemical exposure]*. The best approach for reducing its incidence is still early detection [!!!] , rather than trying to prevent the disease....”

Prof. John Boyages - executive director
Westmead Breast Cancer Institute M.O
23.10.09 p.22
Question

• Does this reassure you that your wives' and daughters' breasts are in good hands?
• Have I missed something about the meaning of the word “incidence”?
What about our Soils?

• Soil health: Primarily talking about topsoil
• We are an ancient continent. Much of our topsoil has been lost to erosian
• Trees and bushes hold topsoils together
• Desertification since arrival of Europeans
• Now one tree standing for every 10 when Cook arrived
• Compare to Aboriginal land management. Read *The Biggest Estate on Earth*, Bill Gammage
Gut bacteria

• Constitute a significant percentage of our immune system. Known anti-cancer effect on colonic cells [Stipanuk Human Nutrition p. 108]

• Maintain hormone balance. Abnormal bugs contribute to PCOs, infertility and hormone dependent cancers

• But what are we doing to our gut bacteria?
• Antibiotics, chlorine, feeding them sugar
GMO?

• “To my knowledge, they have demonstrated that you can get GM plant DNA in the gut bacteria. Everyone used to deny that this was possible” Dr Michael Antonio: King’s College Medical School London

• Translates into us having GM Immune system
Cancer-think minerals

- Selenium
- Iodine
- Zinc
- Magnesium
- Molybdenum
- Germanium
The Angelina Gene

• Selenium protects BRCA 1-2 genes
• Selenium status not assessed in most oncology clinics when advising about mutilation surgery. Why not?

[Ref.]
Increased Rates of Chromosome Breakage in BRCA1 Carriers Are Normalized by Oral Selenium Supplementation

http://cebp.aacrjournals.org/content/14/5/1302.full
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3108170/
Missing in action: Iodine

- 59% of year 4 students in NSW are iodine deplete: [Dr. Mu Li Univ. Syd. MJA Feb. 06]
- Iodine deficiency is known to cause fibrocystic breast lesions in rats
- Fibrocystic breast disease now acknowledged as pre-malignant
- Iodine deficiency linked to breast and ovarian cysts, BPH, and the associated organ malignancies
- Iodine so important—further research indicated. http://www.helpmythyroid.com
- Key names: Dr. Guy Abraham, Dr. Jorge Flechas, Dr. James Howenstine, Dr. David Brownstein –iodine deficiency
Missing in Action Mg and Zinc

• Zinc is essential for genomic stability
• Which means that the integrity of DNA is dependent on it = preventing cells becoming malignant
• “Zinc fingers” have been known for over a decade
• Magnesium has a role in 300 biochemical reactions in the body. Several scholarly articles relating to its actions in preventing cancers such as colon ca..
Are you getting enough of these minerals?

- Australia soils notoriously low in zinc and selenium. [Brazil nuts just might not do it]
- Ask your doctor to measure your plasma zinc
  - Should be > 14. [And copper, [serum], should be >20.]
- Cost around $50. Medicare won't pay. Female cancers often linked to Zn/Cu imbalance
Cancer - think Vitamins

- Vitamin D!!!! Don't get me started!
Missing in Action: Vitamin D: [and “slip.slap.slop”]
Quote

• “... we evolved over a very long period of time to be running around naked in the plains of Africa and... I have a feeling we can tolerate lots of Vit D ...and if you were to lie out naked... you'd be making about 15,000 units of vitamin D, so all this worry about taking 2,000 or 4,000 units a day seems misplaced to me

• Ref George Ebers
  www.abc.net.au/rn/healthreport 22.06.09
The Bad Guys

- How safe are our “safe” chemicals?
- 20% higher rate of prostate cancer in the bush
- Parkinson’s disease and Autistic Spectrum Disorders positively correlated with exposure to agricultural chemicals
POPs and PAHs

- Persistent organic pollutants
- Polycyclic aromatic hydrocarbons
- In Australia it’s about “phasing out” we were still using endosulfan in 2010
Endocrine disruptors

• POPs are also known as “gender benders”. Mostly derived from two sources:
  1. Hydrocarbons, plastics and petroleum products. This includes perfumes, nailpolish and most cosmetics
  2. Pesticides, herbicides and organochlorines.
The agouti gene
Example – the agouti gene
Agouti effects

• The agouti gene is well known for fur colour
• It also carries with it increased risks of obesity, diabetes, cancer and reduced longevity
• Did Mother Nature stuff up here?
• Or is the problems epigenetic?
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Agouti mice

• Pregnant mice were supplemented with folate, choline, betaine, B12, zinc and methionine [selenium]
• Coats of the offspring became browner and animals thinner in the supplemented mice
• Supplements of zinc and [seleno] methionine gave offspring obesity, diabetes and cancer resistance
Pollutants: pesticides

- Vinclozin – viticulture fungicide blocks male hormones
- Methoxychlor - pesticide with oestrogenic activity
- No DNA damage. Epigenetic impact suspected. Reduction of fertility apparent 4 generations [of rats] later
- One in ten of all Australian couples now using assisted reproduction