New Developments in Integrative Cancer therapies: Cancer Stem Cells & Salvestrols

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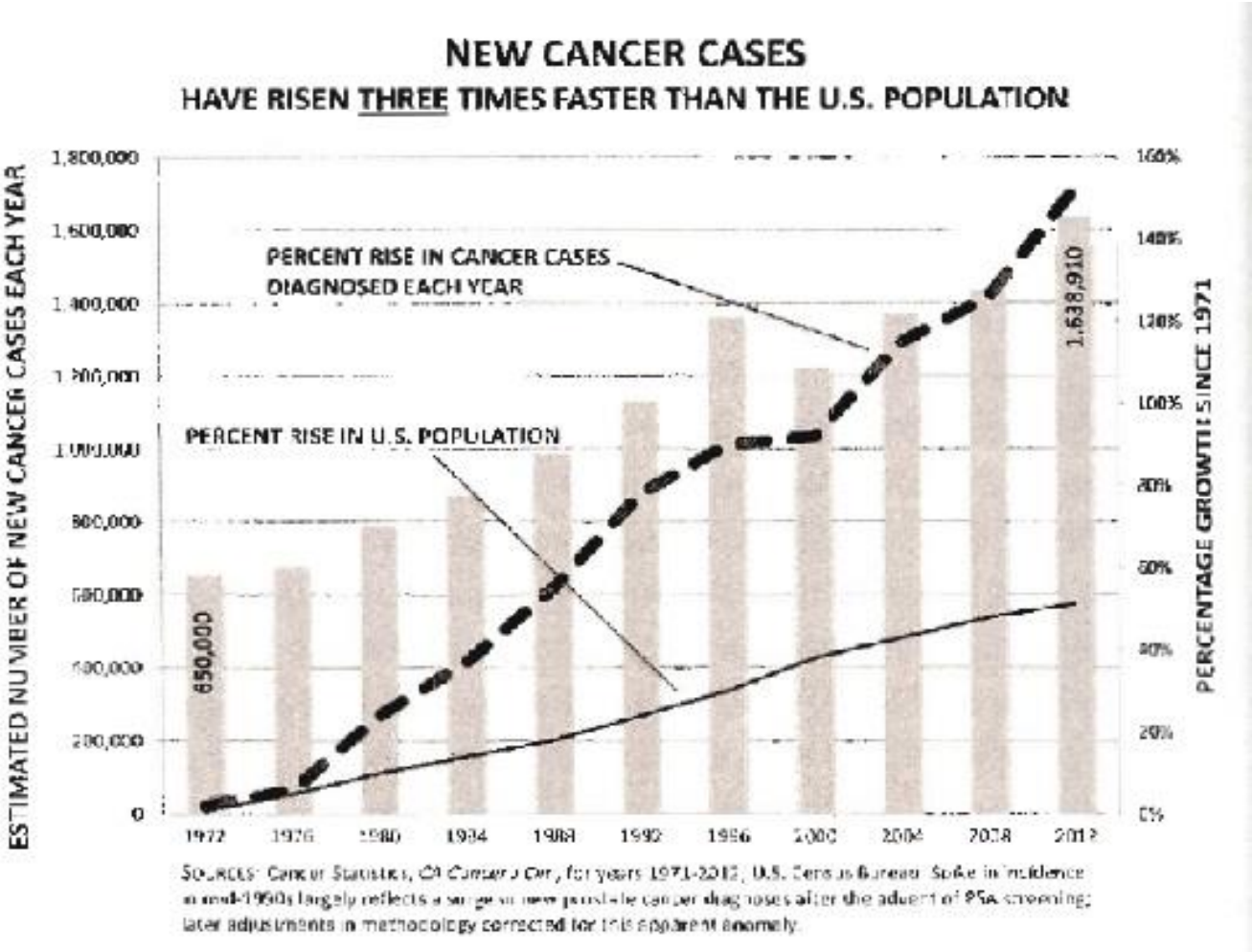
Breast Cancer Options Lecture in New Paltz NY
April 17, 2016

Understanding of Cancer and Cancer Treatments are Changing

- Cancer Treatments- Generally NOT Effective
- Predominant conventional understanding of cancer seems to be wrong

New Cancer Cases Rising Faster than the US Population



Breast CA Options-2016-MBS

Conventional Cancer Therapies

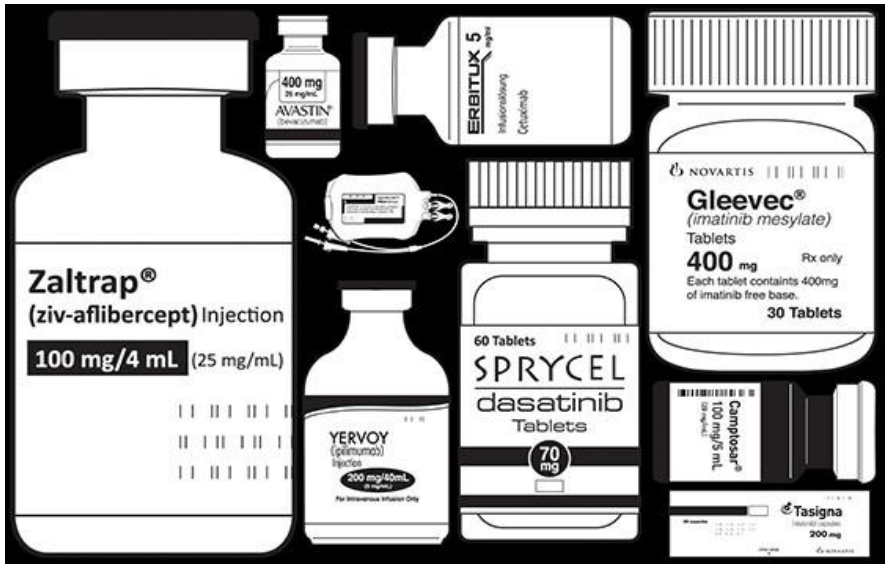
- Surgery
- Radiation
- Chemotherapy
- **Targeted therapies (New kid on the block)**
  They target specific receptors or enzymes within the cancer cell

All Conventional Treatments Can Do Harm Because of Lack of Selectivity

- All can **do harm** because they damage normal cells and tissue along with cancer cells
- Standard of care, supported by insurance coverage largely related to consensus rather than specific studies
- Clinical trials very expensive and can only be supported by pharmaceutical companies
- Forbes 2012 study said that it cost $4 billion to get a new drug approved; makes sense only if drug patentable

From New York Magazine Article in October 2013: **"The Cost of Living"**

http://nymag.com/news/features/cancer-drugs-2013-10/



Avastin, $5,000/month
Zaltrap, $11,000/month
Yervoy, $39,000/month
Provenge, $93,000/Tx Course

Erbitux, $8,400/month
Gleevec, $92,000/year;
Tasigna, $115,000/year
Sprycel, $123,000/year

Standard of Care for Stage I & II Breast Cancer: **Should it Always be Followed?**

- Lumpectomy
- Radiation therapy
- Chemotherapy in some cases
- Anti-Hormonal therapy if cancer is Estrogen Receptor positive
- Possible Monoclonal therapy drug (like Herceptin) if HER2/Nu positive
- Let's first focus on Radiation

Radiation for Breast Cancer: A Questionable Standard of Care

- What is the basis for the automatic recommendation of radiation for any woman undergoing a lumpectomy for breast cancer?
- **Lumpectomy or Modified Radical Mastectomy plus radiation therapy** replaced the Radical Mastectomy, which removed the pectoral muscles in the 1960's

Radiation and the Treatment of Breast Cancer
A Cancer Decisions® Report (Ralph Moss)

- **Reduces** risk of a **recurrence in the same breast**
- Does **NOT reduce regional recurrence or distant metastases**
- **No impact on overall survival** with increased deaths from causes other than breast cancer.
- Harmful effects (e.g. heart damage, lymphedema) may occur later
- See: www.cancerdecisions.com for report

Should Radiation be Automatic for Breast Cancer?

- So, should women automatically accept radiation for breast cancer after lumpectomy; we see many patients who refuse radiation and do intensive integrative program after lumpectomy
- Might radiation actually reduce the positive effects of a good integrative treatment program? We don't know, but this is a real possibility
- No studies that actually look at alternative program vs standard of care plus alternative program; don't expect them
- Many women do fine with radiation therapy, but should be fully informed before their decision

Some Patients Choosing to **Avoid Some Portions of Standard of Care**

- Patients left with difficult choices and need to make decision with insufficient information
- Frequently need to use common sense and what feels right for them
- Many uncomfortable going against conventional suggestions
- Lots of anxiety associated with making decisions about cancer treatment-both conventional and alternative
- **WHAT CAUSES CANCER???? The answer to this question gives insights about treatment**

Conventional View on Causes of Cancer: **Somatic Mutations Theory**

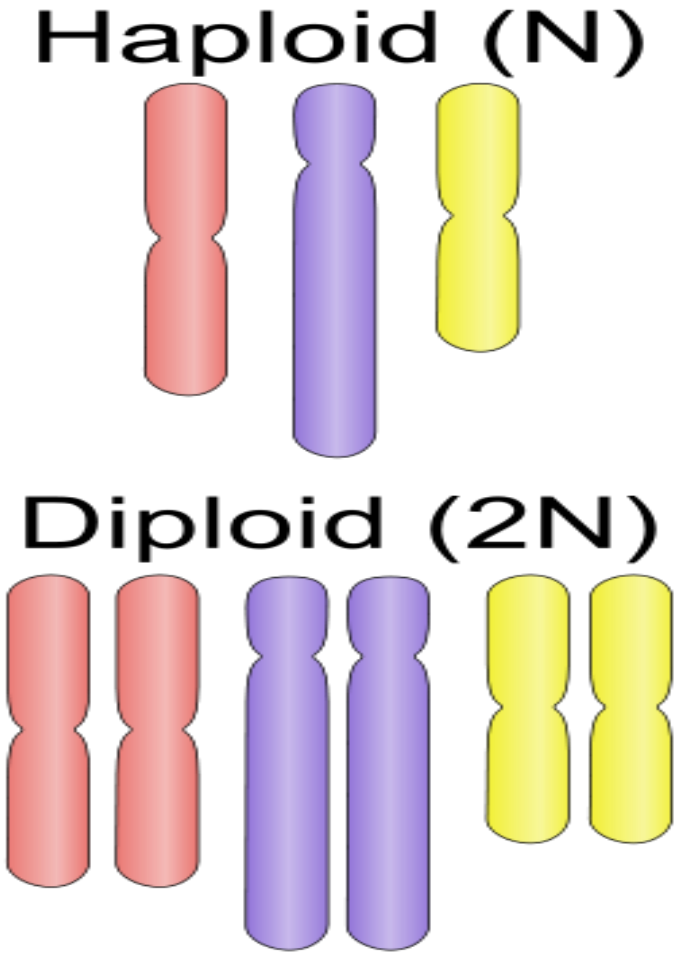
- Cancer arises from a **stepwise accumulation of genetic and epigenetic changes in oncogenes, suppressor genes and DNA repair genes** that liberate neoplastic cells from the homeostatic mechanisms that govern normal cell proliferation
- Targeted therapies based on looking for **overexpressed genes and developing drugs to address them** (e.g. Gleevec, Aromatase Inhibitors, Tamoxifen)
- Largely not successful and very expensive, though evidence of benefit of these examples

Basics of Chromosomes and Genes

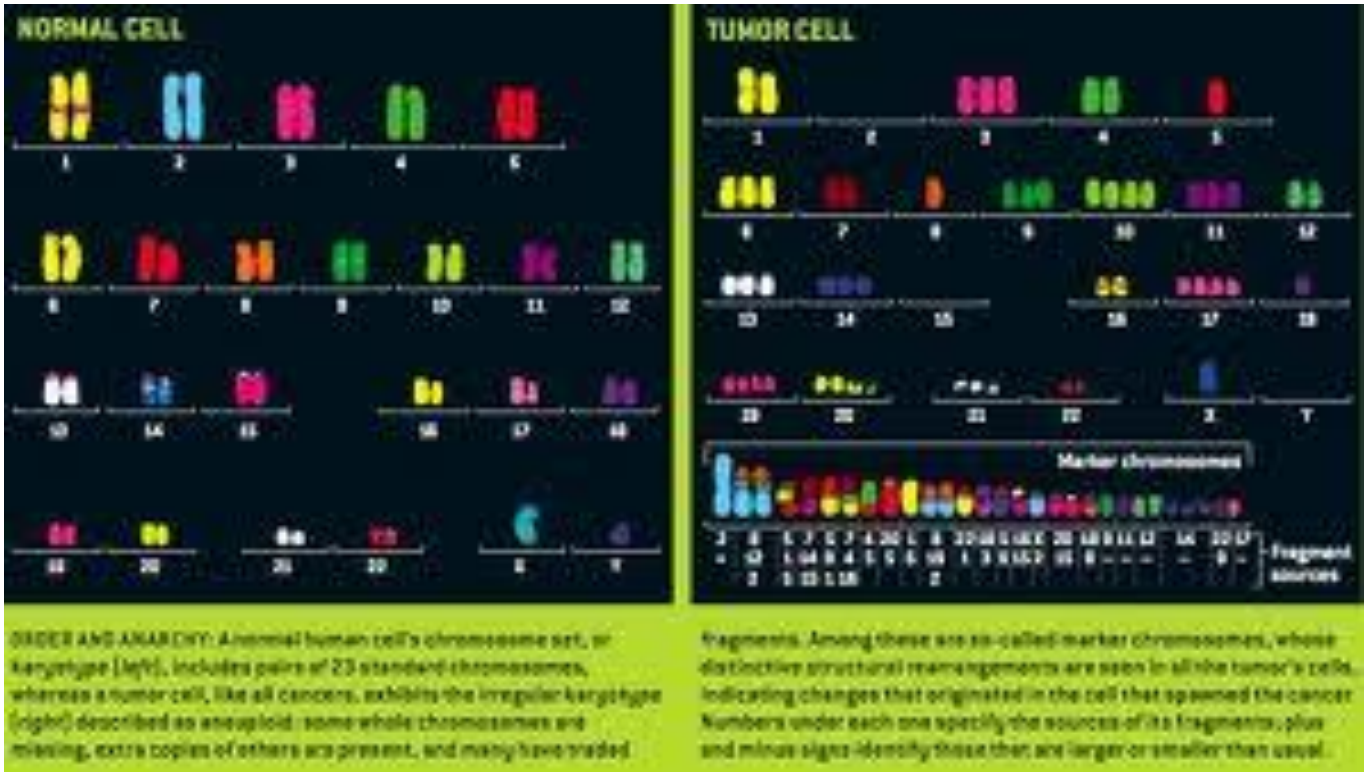
- To understand the current theory about cancer, need to understand a little about genes and chromosomes
- Each human cell has **22 pairs of chromosomes**, 2 X chromosomes in women and an X and a Y chromosome in men
- Genes are located on chromosomes and contain the genetic material inherited from our parents

Ploidy

- **Ploidy refers to the number of sets of chromosomes in the nucleus of a cell**
- Haploid = 1 set
- Diploid = 2 sets (**What we have)**
- Polyploidy = More than 2 sets
- **Aneuploidy** refers to disorganized sets **(in Cancer cells)**



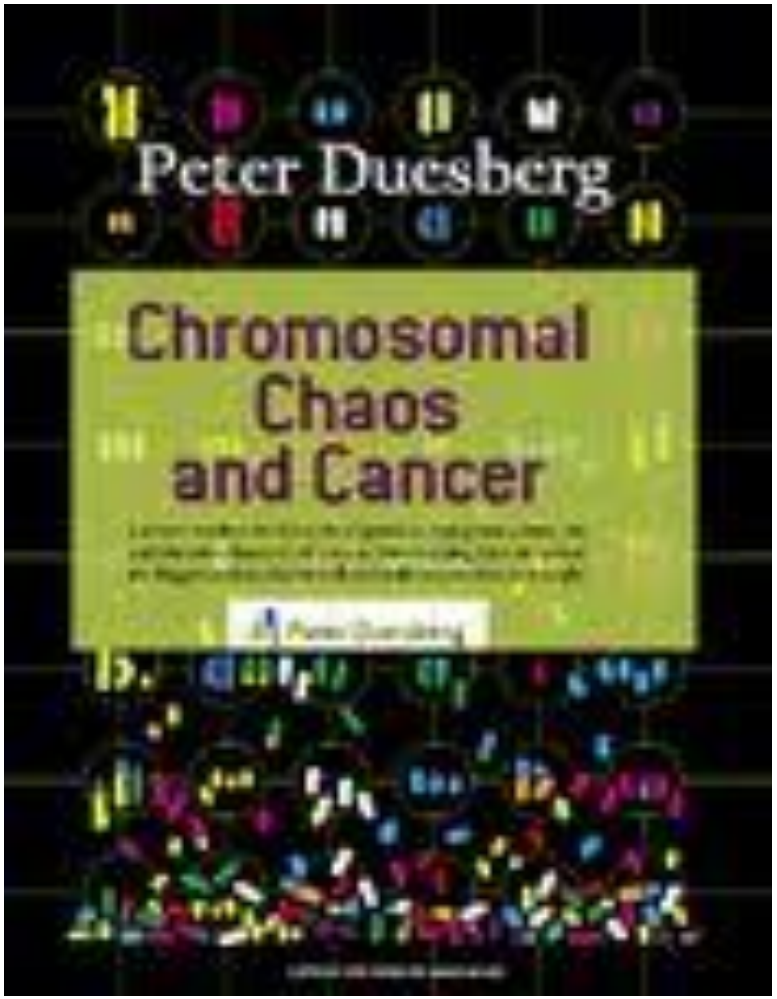
Diploidy vs. **Aneuploidy**: Inside the Nucleus of a Cell



Diploidy-NL **Aneuploidy-CA**

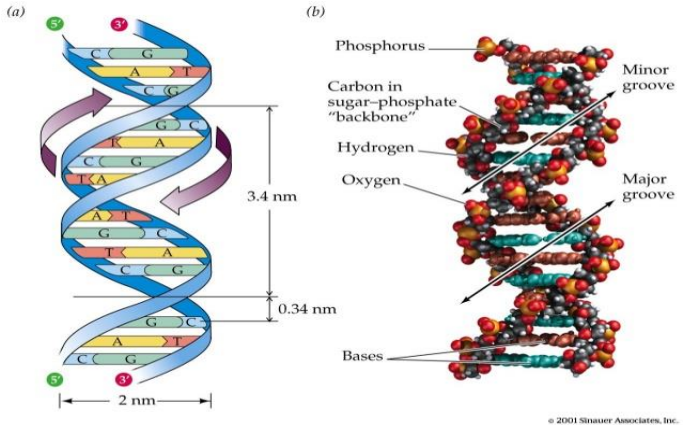
Chromosomal Chaos & Cancer: Scientific American May 2007

- The nuclei of cancer cells contain entire chromosomes (which carry thousands of genes) are **severely scrambled—duplicated, broken, structurally rearranged or missing entirely**
- Generally ignored by conventional oncology
- **Chromosomes & Gene Changes are secondary to the primary cause of cancer**



DNA and the **Double Helix Outlined** by James Watson PhD and Francis Crick PhD

- 1953-Paper; beat Linus Pauling who was also working on the structure of genes
- Led to Human Genome Project; all genes worked out by careful research

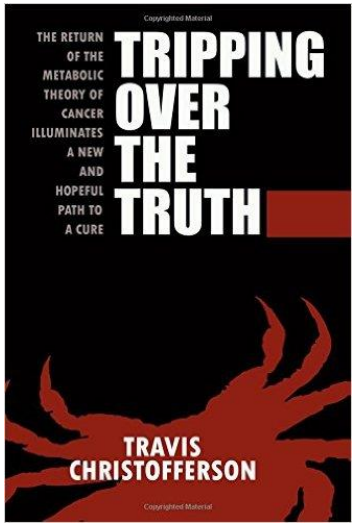


Human Genome Project Sequenced by 2003

- Believed easy to find relationship between common cancers and gene sequences
- **Total Failure-Much more complex**
- Numerous gene sequences even within one cancer

New Book 2014-Traces the History of Cancer and the Various Theories

- Shows how the less than useful theory of the somatic mutational theory of cancer fails to lead to useful treatments
- Outlines how the metabolic theory of cancer due to mitochondrial damage results in potentially useful treatments
- **Some potentially useful and unheard of treatments discussed**



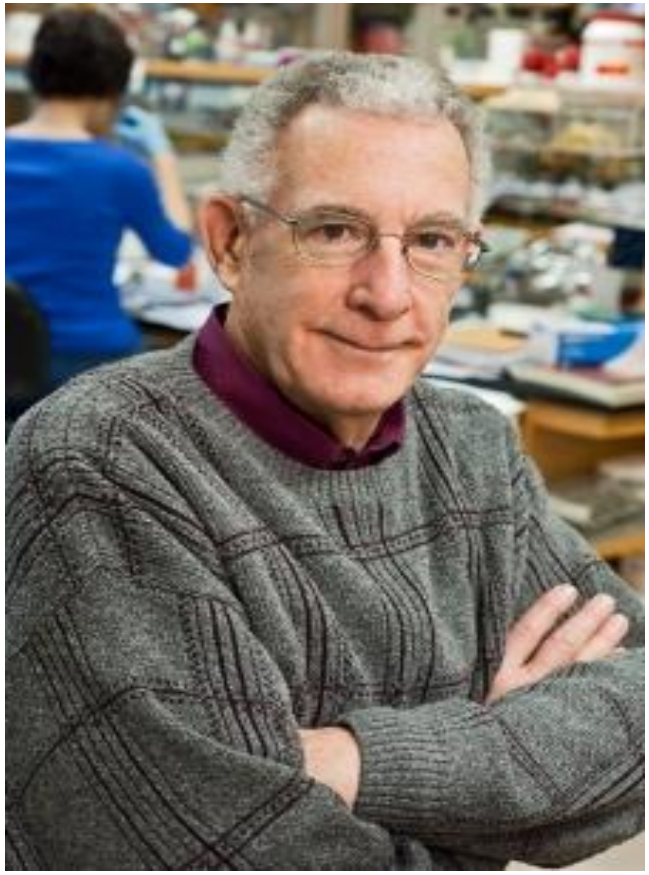
Cancer: a Metabolic Mitochondrial Disease-NOT a Nuclear Disease

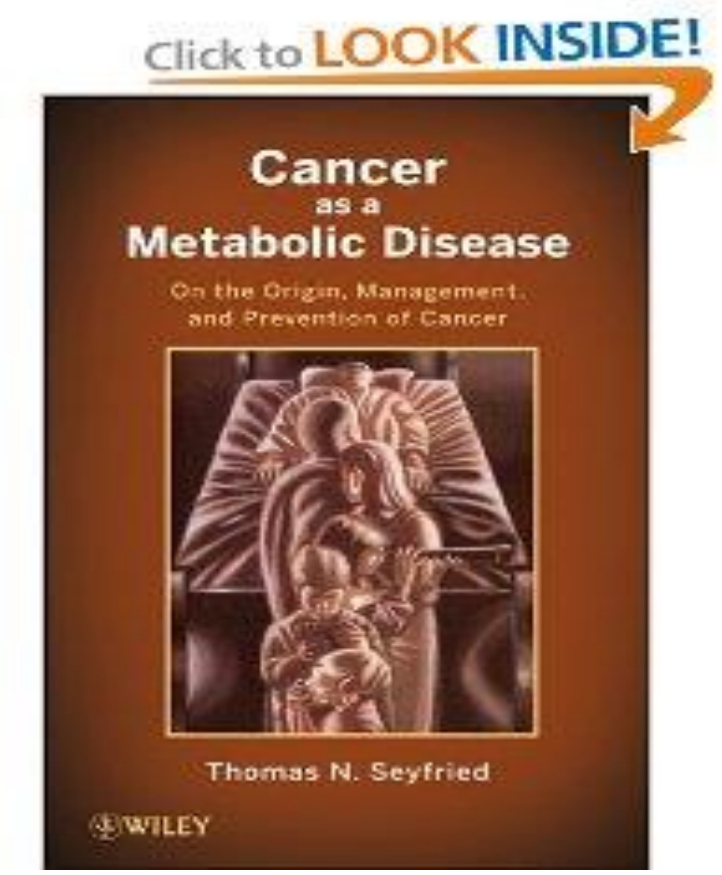
- Contrary to prevalent scientific oncological consensus, cancer is **NOT** primarily a nuclear genetic disease or even a nuclear chromosomal disease
- Cancer is a metabolic disease associated with **mitochondrial damage**
- Originally proposed by **Otto Warburg MD PhD in the 1920's and 30's,** and more recently by **Thomas Seyfried PhD**

Otto Heinrich Warburg, MD, PhD

- Won **Nobel Prize** in Physiology or Medicine in 1931
- Described the **fundamental difference** between normal cells and cancer cells
- **Cancer cells unable to effectively use oxygen** to produce energy
- Cancer cells form as a result **of low oxygen environment**

Book: *Cancer as a Metabolic Disease* by Thomas Seyfried PhD; 2012





Fundamental Difference Between Cancer Cells and Normal Cells

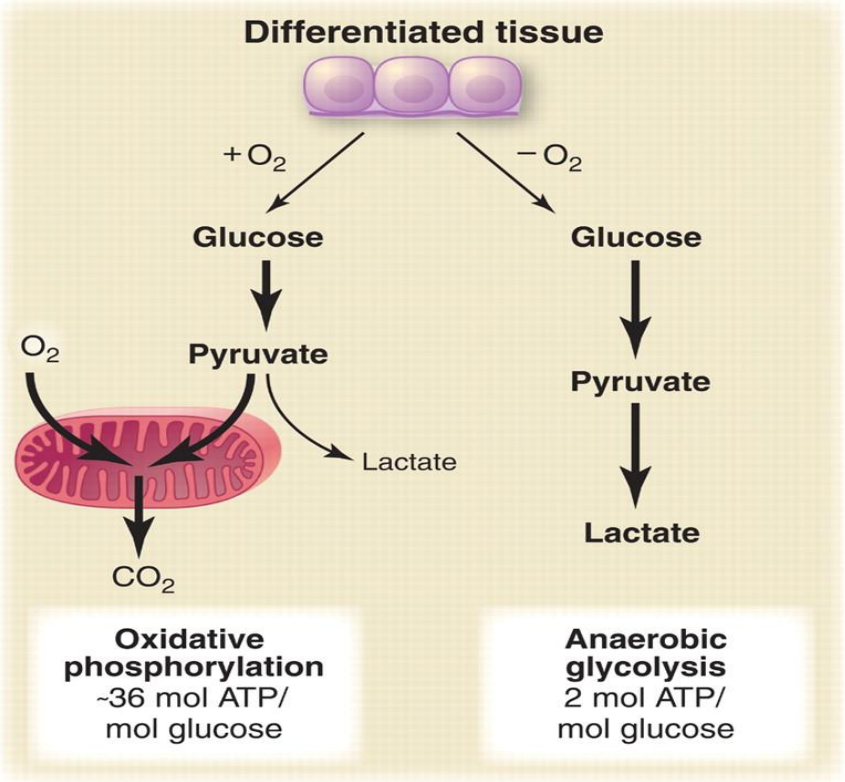
- Energy of most biochemical reactions in the body come from **ATP molecules**
- **Cancer cells** produce energy (ATP molecules) by **glycolysis or fermentation**, the metabolism of sugar **without using oxygen, even if oxygen is present (Warburg Effect)**
- **Normal cells** produce energy primarily by using **oxygen**

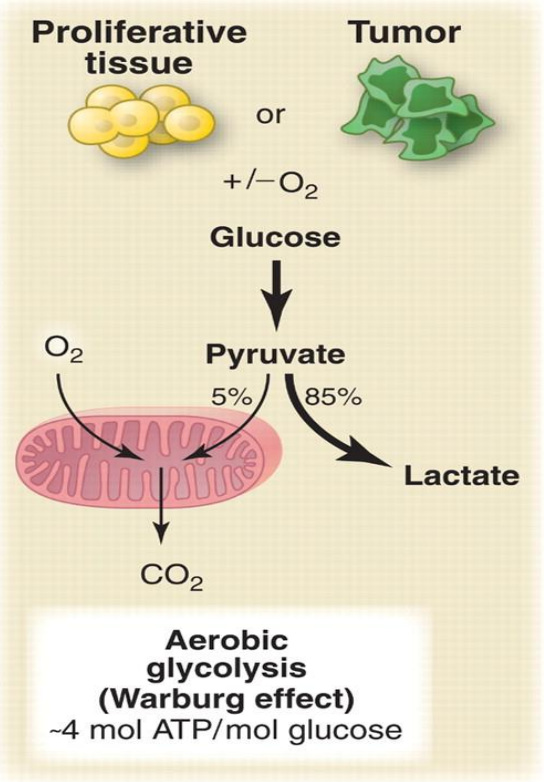
Oxidative Metabolism Needs Less Glucose

- **The Krebs cycle and electron transfer** in the **mitochondria** use oxygen to produce between **30 and 38 molecules of ATP** from 1 molecule of glucose
- Anaerobic metabolism or **glycolysis** produces **2 molecules of ATP from** 1 molecule of glucose.
- **Cancer cells primarily use anaerobic metabolism** and not oxygen to metabolize glucose
- So, **cancer cells need 15 to 19 times more glucose** than normal cells to produce the same amount of energy
- **Practical Implication: Excessive sugar drives cancer growth (generally unrecognized by oncologists)**

ATP Production in a **Normal Cell vs. a Cancer Cell**

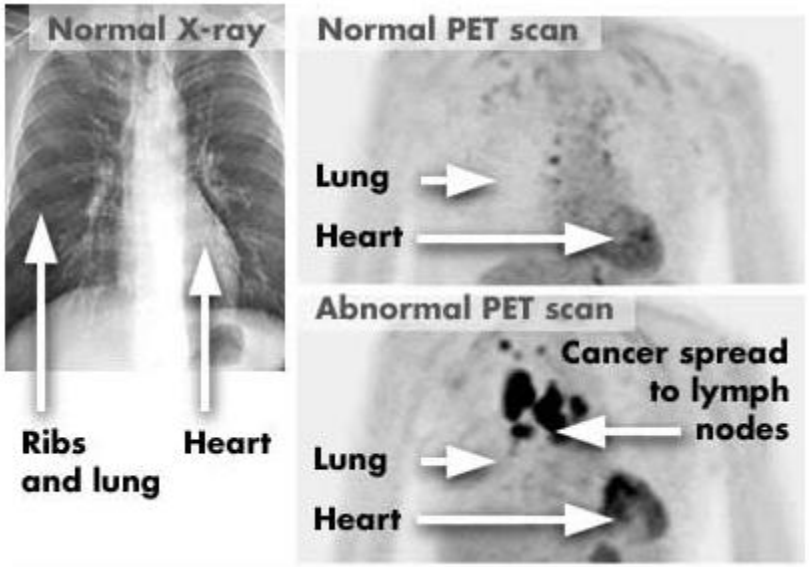
Normal Cell (in mitochondria) **Cancer Cell**





38 ATP Molecules 2 to 4 ATPs

PET Scans Make Use of the "Warburg Effect" to Find Cancers (Positive Emission Tomography)



- A PET scan, unlike a normal X-ray, **can detect cancer** before organ or gland enlargement occurs by using fluorescent tagged glucose. Here a normal X-ray of the chest (left) is compared with a PET scan of the chest producing normal results (top right) and a PET scan revealing cancer that's spread to the lymph nodes (black areas in bottom right. **Radioactive sugar accumulates in cancer cells and these can be seen on a PET Scan**

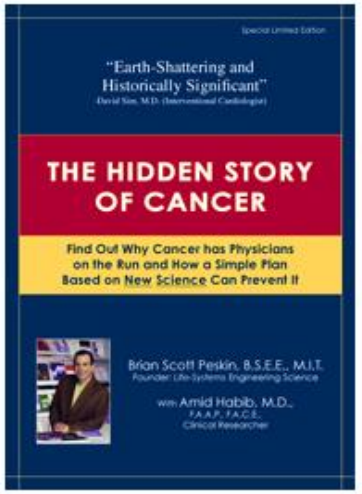
Cancer Cells Develop in a Low Oxygen Environment-Essential to Warburg Hypothesis

- Cancer cells develop as an **adaptation to a low oxygen environment**
- They cannot use oxygen because of **damage to mitochondria**
- This adaptation develops over a long period of time and become **irreversible** and cancer cells cannot use oxygen, even when it is present (the **Warburg Effect**)
- This view that cancer is due to mitochondrial damage as expressed by Thomas Seyfried PhD

Brian Peskin and "*The Hidden Story of Cancer*"

- Scholarly book explaining the Otto Warburg theory of cancer and how **fatty acids in cell membranes are involved**
- Well referenced; critical of status quo
- **Cancer is stimulated by a low oxygen cellular environment**
- Peskin hypothesizes how this happens

Brian Peskin



What Contributes to a **Low Cellular Oxygen Environment that Leads to CA**

- Peskin presents evidence that **abnormalities in the fatty acids in membranes of cells reduces oxygen to cells**
- Peskin points out that **95% of parent essential fatty acids** [Linoleic Acid-Omega 6 and Alpha Linolenic Acid-Omega 3] wind up in the cell membranes of cells
- Only 5% is used for derivatives that produce prostaglandins (GLA, EPA, DHA)
- The **double bonds of these parent fatty acids** within the cell membrane **attract oxygen into cells**

Adulterated Fatty Acids Increase Shelf Life and Distort Cell Membranes

- In order to increase shelf life, food processing companies, change the **structur**e of the fatty acids in the food (trans FA are one example)
- These "**adulterated fatty acids**" are incorporated into the **cell membranes** throughout the body
- If **adulterated fatty acids replace parent essential fatty acids, oxygen content of cells can be reduced by 50%** (cancer forms over time with 33% oxygen reductions, according to Warburg)
- **So, excessive sugar intake and adulterated fatty acids in our diets are two of the main causes of cancer**

Fish Oil Supplements Not Recommended: An Alternative Opinion

- Fish Oil Capsules and liquid are **unphysiologic** and not recommended (one capsule equals several fish meals)
- These longer fatty acids are incorporated into the cell membrane and distort it, worsening function
- Reported benefits are generally short-lived and are **analogous to anti-inflammatory effect of using steroids**
- Both conventional and alternative practitioners prescribe lots of fish oil

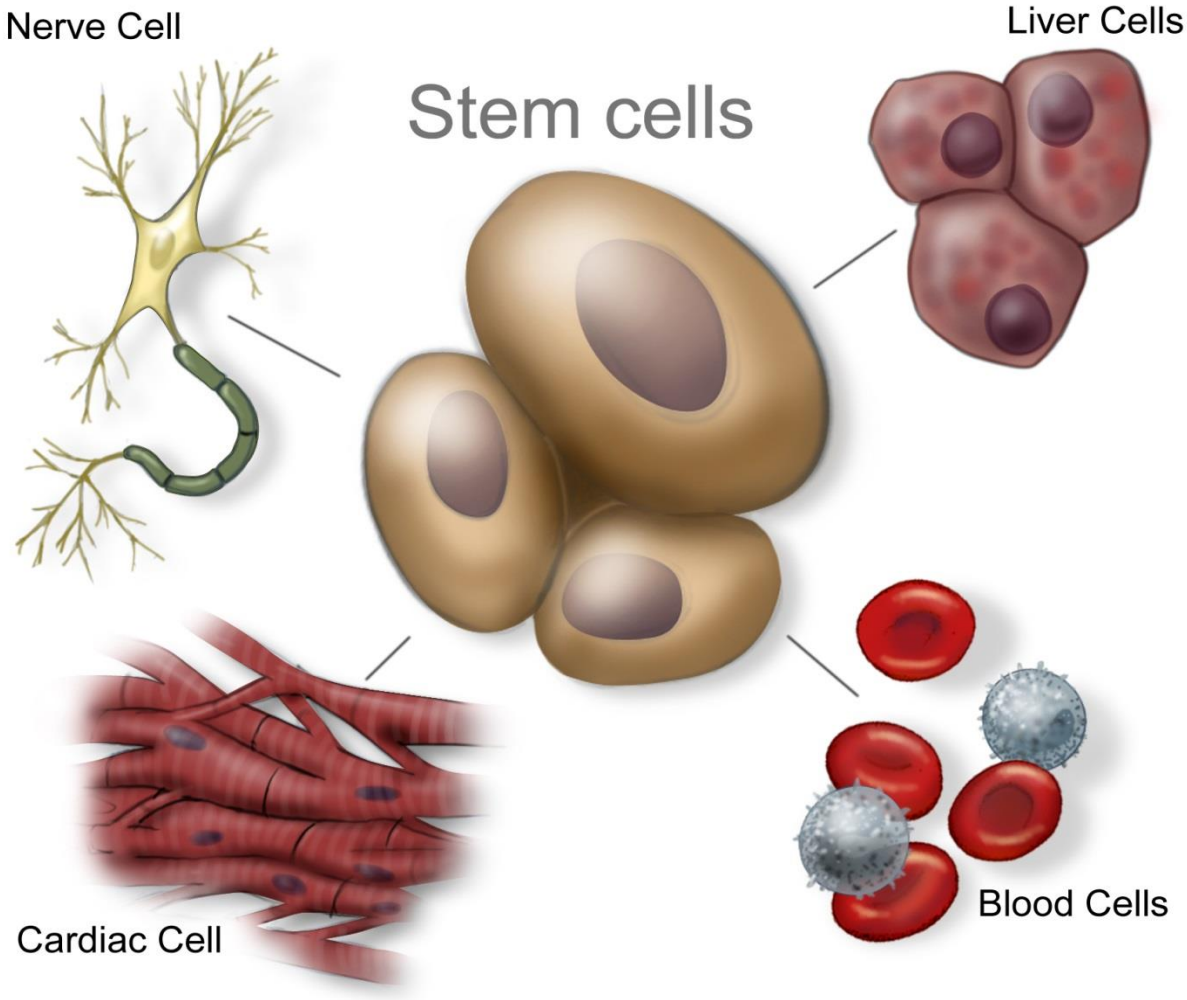
Questions a Patient or Support Person Should Ask Before Making CA Treatment Decision

- Likelihood survival time will be increased
- Likelihood quality of life will be improved
- Risks associated with the treatment:
  - Morbidity
  - Mortality
  - Secondary cancers

Why Are the Results of Conventional Treatment for Stage IV Cancers So Poor?

PRESENCE OF CANCER STEM CELLS MAY BE ONE OF THE MAIN REASONS!!

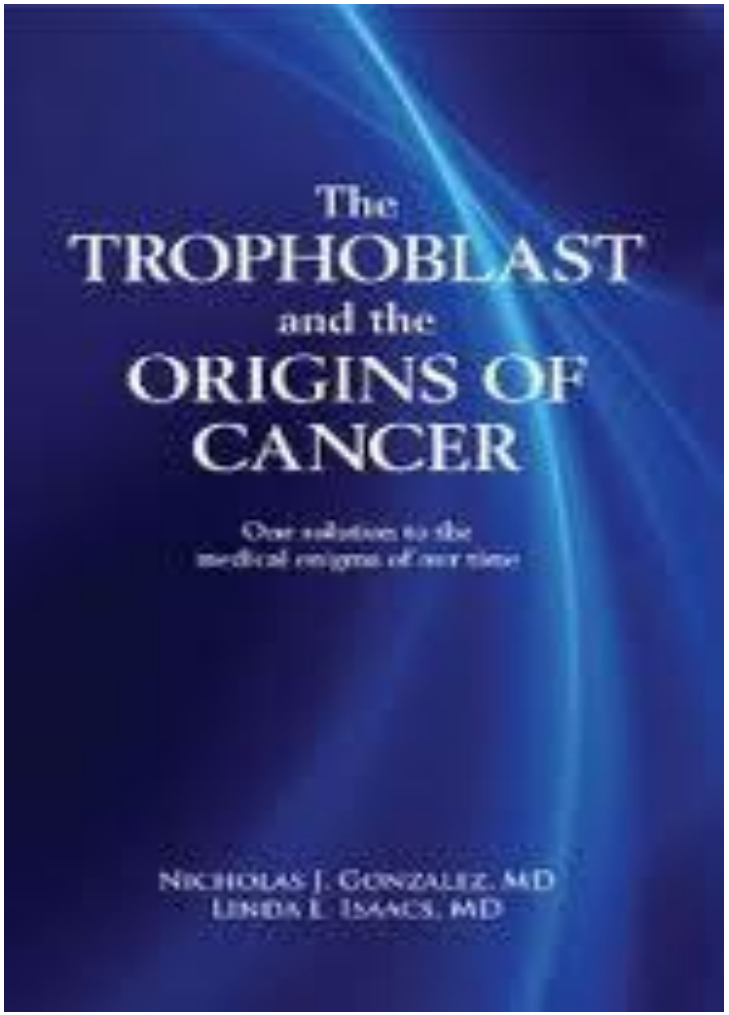
Normal Stem Cells **Repair** Damaged Tissue



Origin of **Normal** Stem Cells

- During embryological development of the fetus, 80% of the **precursors** to the ova or spermatozoa become ova in women and spermatozoa in me
- The rest of these **pluripotent cells** (20% of them) are scattered throughout the body and become the stem cells, which are later used for repair
- This theory was first elaborated by embryologist **John Beard MD, PhD in his trophoblastic theory of cancer in 1911**. For more about this theory, see the book by the late Nicholas Gonzalez MD: *"The Trophoblast and the Origins of Cancer"* (2010).

Book: **Trophoblast and Origins of Cancer-Nicholas Gonzalez MD** (recently deceased)



Cancer Stem Cells: **VERY IMPORTANT**

- Stem cells that have become cancerous
- **Behave differently from cancer cells**
- Cancer cells constitute only **1 to 5%** of solid cancers
- **Cancer stem cells** are the only ones that **metastasize**
- **Resistant to radiation and chemotherapy!!!!**
- Cancer stem cells discussed over the **last 15 years of so**; they are changing conventional cancer approach
- Shrinkage of tumor not good parameter for assessing treatment results; **upsets how oncology done today**
- What does stop CA Stem cells: **Anti-inflammatory** agents inhibit cancer stem cell growth

Size of Tumor May be Misleading

- Do not be misled into thinking tumor reduction means you are making progress, as you may not be
- "If the cancer stem cell hypothesis is true, treating the majority of dividing cancer cells will shrink a tumor but won't cure the cancer unless we can target the cancer stem cells themselves. That would **explain why tumor shrinkage—the gold standard for measuring a drug's effectiveness—doesn't always translate into longer survival for patients."**

Daniel Haber, MD

Director Mass General Hospital Cancer Center

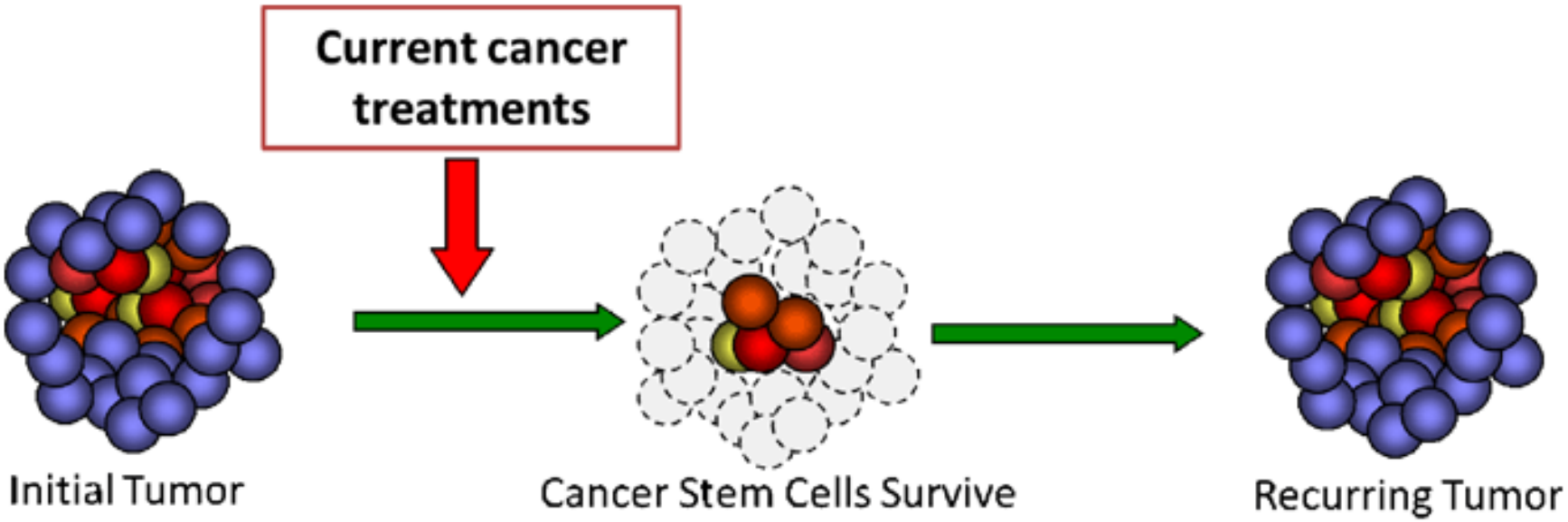
Max Wicha MD: **Establishment** Oncologist and Researcher

- MD from Stanford, Residency at U of Chicago
- Research at NCI
- **Founding Director Emeritus, University of Michigan Comprehensive Cancer Center**
- **www.youtube.com/watch?v=AG22BEXscQE**
- **30% of breast and prostate CA pts have bone marrow mets at time of diagnosis**

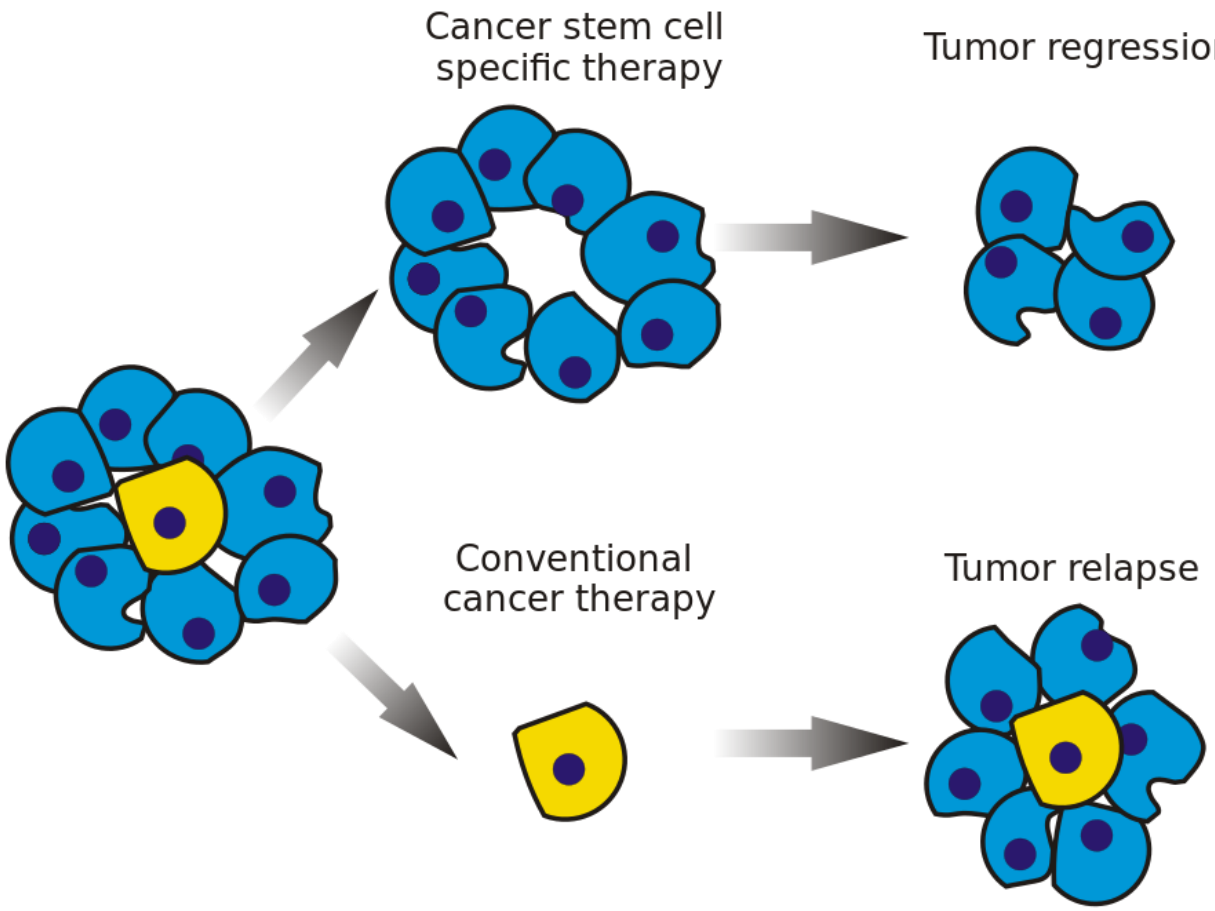
Max Wicha MD

University of Michigan

Cancer Stem Cells Survive and Thrive with Conventional Therapy



Specific Cancer Stem Cell Therapy



Many **Natural Substances Block Inflammatory Stimulation** of CSTs

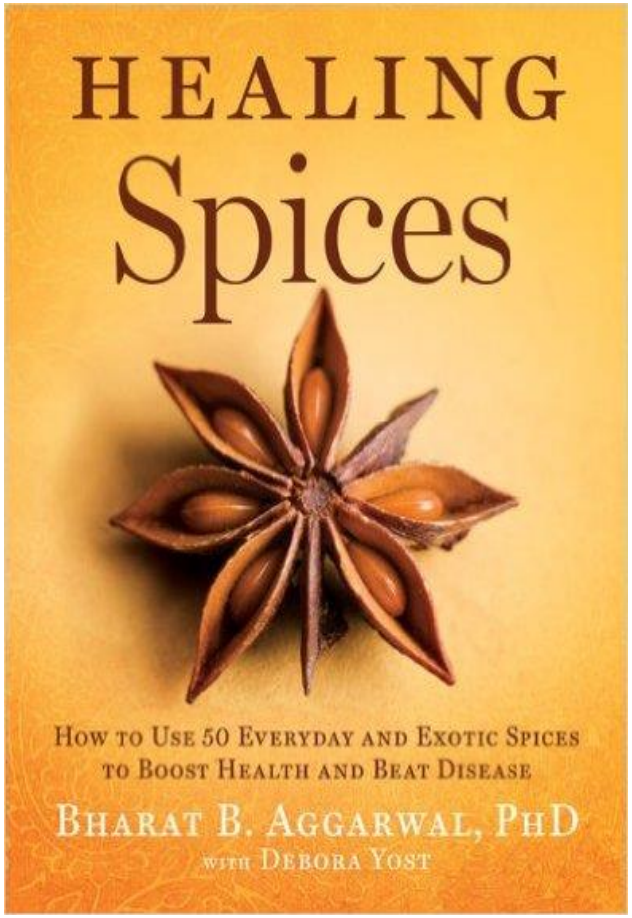
- Curcumin
- Thymoquinone from black cumin seed
- Sulforaphane and other glucosinolates and isothiocyanates from cruciferous vegetables
- Vitamin D
- Boswellia
- Parent Essential Fatty Acids
- Stabilized aloe vera extract

Bharat B Aggarwal PhD

- PhD Biochemistry from Univ. of California, Berkeley 1977
- Genentech-Research from 1980-1989
- Researched anti-cancer properties of herbs-Espec Curcumin
- MD Anderson Houston TX-Chief of Cytokine Research Center from 1989-2015-Left recently
- Published over 500 articles
- Recent retraction of 7 articles

Curcumin & Cancer Cells: How Many Ways Can Curry Kill Tumors Selectively?

- 2009 Article in the American Association of Pharmaceutical Scientists
- Extraordinary number of ways that curcumin can do this-Highly technical article
- http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2758121/

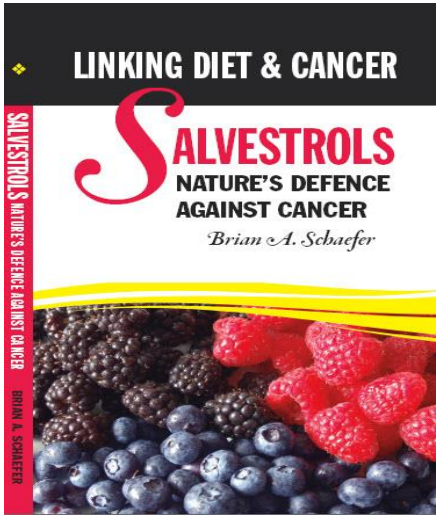


Another Strategy for **Killing Cancer Cells Without Harm** to Normal Cells

- Learned about Salvestrols **7 years ago**
- **Discouraged because patients taking Salvestrols COULD NOT take B17, Laetrile, amygdalin**
- Most of my cancer patients were taking B17 orally or IV at that time (my experience goes back to 1975)
- **Received Brian Schaefer's book on Salvestrols-2012**
- **Impressed by theory and case histories**
- Began using Salvestrols at the end of 2012

Book by Brian A Schaefer-2012

- **History of the discovery of CYP1B1 & Salvestrols**
- **Case histories** of patients using salvestrols
- Schaefer met Burke, Potter & Daniels in the early 2000's & fascinated with CYP1B1 and Salvestrols
- **Brian distributes the Salvestrol supplement in North America**



Professor Dan Burke PhD: Discovered **CYP1B1** High in CA Cells; Not NL Cells

- Degrees in Biochemistry & Drug Metabolism in UK
- Authored over 200 published research studies
- Research in the Cytochrome P450 family of enzymes
- **Early 1990's-Discovered the enzyme protein CYP1B1 present in cancer cells and not in normal** cells (ultimately found in 26 different cancers)

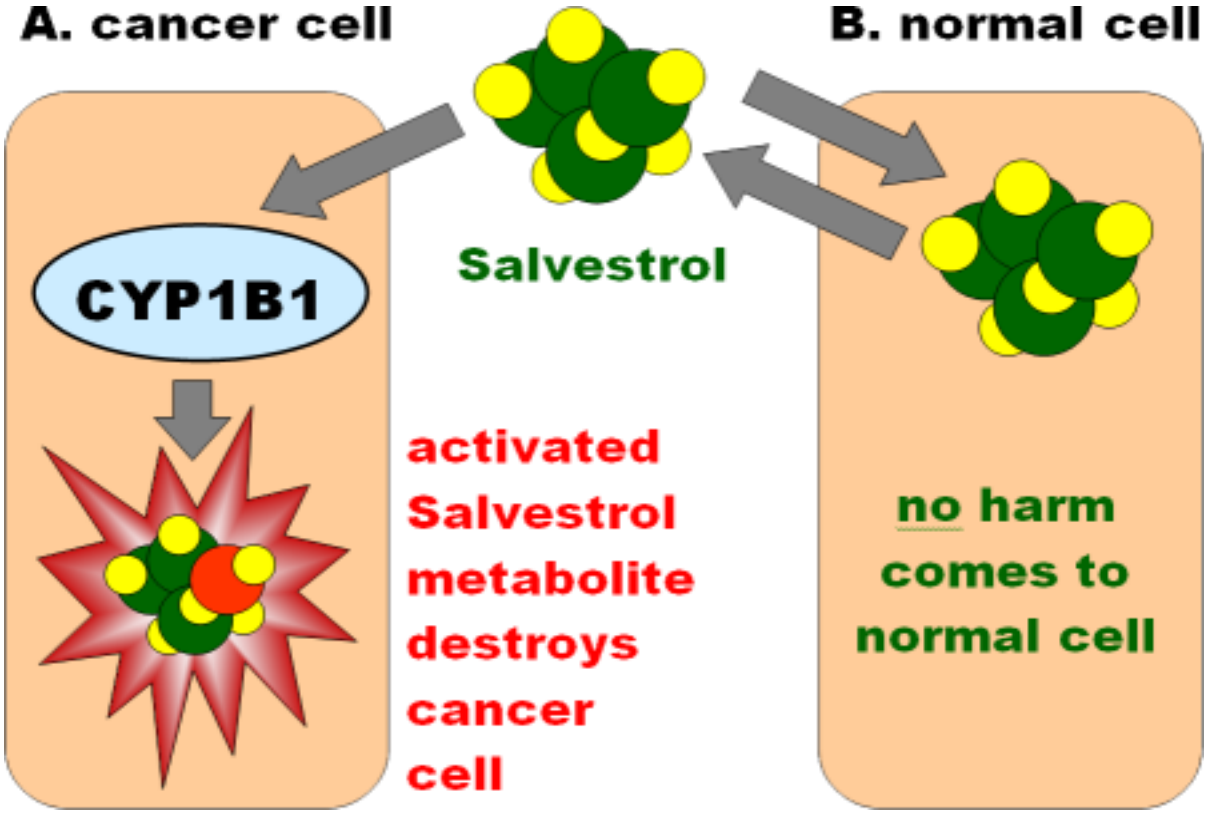
Essentials of the **Protein-Enzyme** CYP1B1

- CYP1B1 is considered a **universal cancer marker** by some (e.g. researchers at the **Dana Farber** Cancer Center in Boston in a 2008 paper, though currently not on website)
- Research showing the presence in brain cancer cells but NOT normal brain cells has been done at **MD Anderson Cancer Center**
- **No mention of this concept at NIH website & this concept remains controversial in the USA**
- Question: Why is CYP1B1 in cancer cells?

CYP1B1 & the Discovery of **Salvestrols**

- **Hypothesis:** CYP1B1 protects against cancer
- Research found a group of relatively inert substances found in **organic** plants (fruits, vegetables and herbs)
- Substances when mixed with CYP1B1 form metabolites that **inhibit cancer cell growth;** named them **Salvestrols**
- Most people suffer from a **deficiency** of salvestrols, which predisposes them to cancer
- **Salvestrols have no effect on normal cells** which do not have CYP1B1

Effects of Salvestrols on Cancer Cells & Normal Cells



Correcting Salvestrol Deficiencies

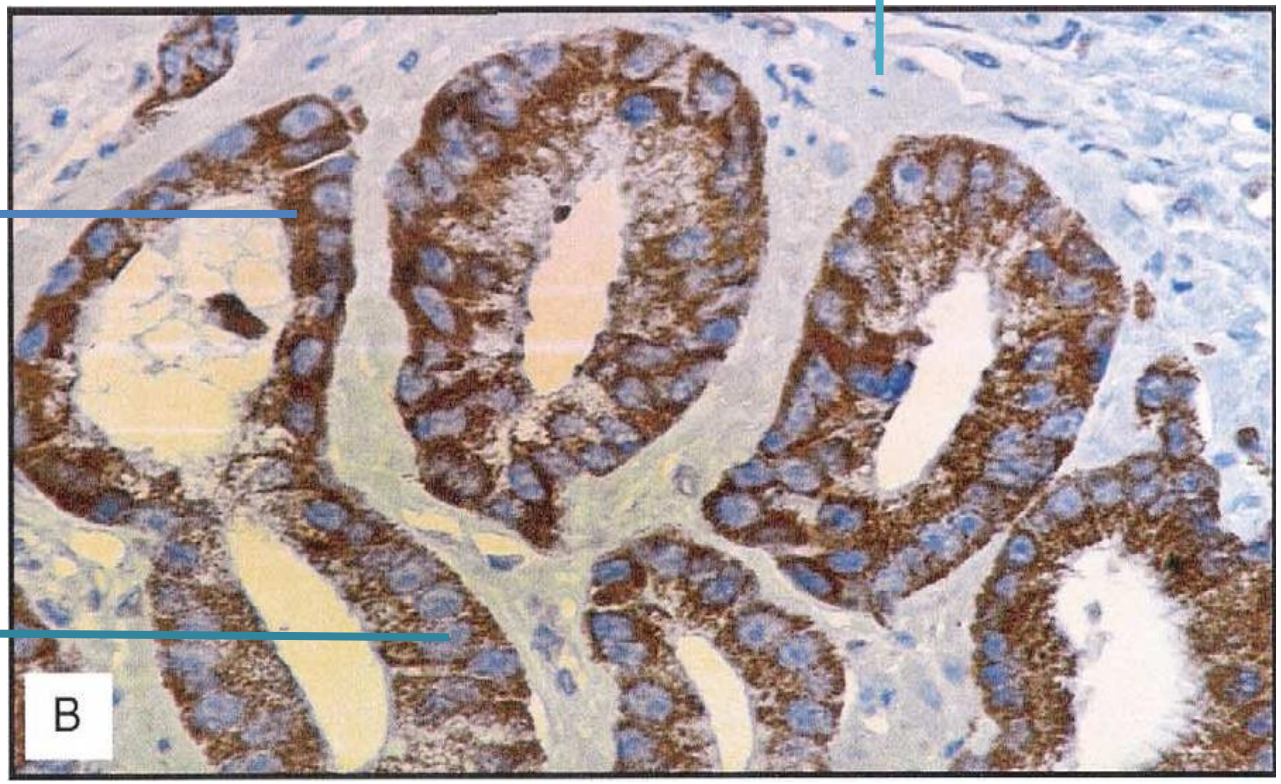
- By eating **organic** fruits and vegetables high in Salvestrols, a person will convert the Salvestrols to metabolites, which are capable of inducing apoptosis in any cancer cells lurking in the body
- For this to work properly, **inhibitors of CYP1B1 need to be avoided**
- Salvestrol deficiency can be corrected with a diet rich in salvestrols or with a **salvestrol supplement**
- **The CYP1B1-Salvestrol system may be nature's rescue mechanism from cancer**

prostate carcinoma biopsy
at 400x magnification

normal cells ✗ **CYP1B1**

cancer cell
cytoplasm
✓**CYP1B1**

cancer cell
nucleus
✗ **CYP1B1**



biopsy chemically stained **blue** for cell structure (H&E variant)
and **brown** for CYP1B1 (our immunohistochemical stain)

Carnell, D. et al. Int. J. Radiation Oncology Biol. Phys. ***58****: 500-509 (2004)*

Expression of CYPIBI in biopsies of 12 different cancer types and 14 normal tissues

Tissue	Normal (# positive / # tested)	Cancer (# positive / # tested)	
Bladder	0/8	8/8	(transitional cell carcinoma)
Brain	0/12	11/l2	(astrocytoma)
Breast	0/10	12/12	(invasive ductal carcinoma)
Colon	0/10	11/12	(adenocarcinoma)
Connective tissue	0/9	8/9	(sarcoma)
Esophagus	0/9	8/8	(squamous carcinoma)
Kidney	0/11	11/11	(carcinoma)
Liver	0/8	*Not tested*	
Lung	0/8	7/8	(squamous carcinoma)
Lymph node	0/5	9/9	(non-Hodgkin's lymphoma)
Ovary	0/5	7/7	(adenocarcinoma)
Skin	0/6	6/6	(squamous carcinoma)
Small intestine	0/5	*Not tested*	
Stomach	0/10	9/10	(adenocarcinoma)
Testis	0/8	8/8	(malignant germ cell tumor)
Uterus	0/7	7/7	(adenocarcinoma)
Total	**0 / 130 (0%)**	**122 / 127 (96%)**	

Murray, Taylor, McFadyen, McKay, Greenlee, Burke & Melvin; Cancer Res. ***57:*** *3026-31031 (1997)*

CYP1B1 Gene, Messenger RNA & Enzyme: Reason for Scientific Confusion

- Some reports said CYP1B1 present in non-CA cells; so whole theory is misguided
- CYP1B1 **gene** is found in every cell in the body
- **Messenger RNA** CYP1B1 is found both in cancer cells and **some non-cancer cells**
- CYP1B1 **enzyme** is found almost exclusively in **cancer cells or precancerous cells**
- **Confusion** in medical literature about where CYP1B1 resides is largely based on confusion between the **messenger form of CYP1B1 and the enzyme form**

CYP1B1 **Inhibitors** Prevent Salvestrols from Working Properly

- **Amygdalin=Vitamin B17 = Laetrile or sources** like bitter apricot kernels (CAN'T USE WITH SALVESTROLS)
- **Resveratrol in high doses**
- Citrus flavanone **naringenin** from grapefruit
- **Carbon monoxide** (present in cigarette smoke)
- Various **herbicides and pesticides, such as Roundup, as well as many household chemicals**

CYP1B1 **Inhibitors (2)**

- Cannabis (Marihuana), St. John's Wort, Ginkgo biloba, Gin Seng, Hesperidin
- **Artificial Sweeteners** interfere with the absorption of salvestrols & should be avoided
- Calcium D Glucarate may also reduce absorption or interfere with salvestrols getting into cells
- **Metformin**
- Probably are others
- Need to **avoid CYP1B1 inhibitors** for CYP1B1 to work properly & interact with salvestrols

Salvestrols-Relative Effectiveness: **Effect on Cancer Cells vs Normal Cells**

Compound:	Classification:	Selectivity score:
Methotrexate	chemotherapy	= 1
S40	salvestrol	= 10
S31G	salvestrol	= 22
S52	salvestrol	= 32
S54	salvestrol	= 1,250
Stilserene	synthetic salvestrol	= 4,304
S55	salvestrol	= 23,000

Phytonutrients found in fruit & vegetables	+	Enzyme intrinsic to cancer cells	=	Apoptosis – cell death
Salvestrols	+	CYP1B1	=	Anticancer agent

Salvestrol Supplement

- Some salvestrols > 20,000 to 1
- **Potency measured with Point system**
- Good organic diet contains about 300 points
- **Each capsule is 2,000 Points**
- Dose depends on severity of condition

Salvestrol Point System & Dosages

- Based on the **selectivity of action** on CA vs NL cells
- **Excellent organic food diet** contains **300 points daily**
- **Each Salvestrol Platinum** Capsule™ contains 2,000 points [4 extracts (2 from citrus & 2 from bilberry)]; Taken with or after meals; Two of the Salvestrols in the capsule have Selectivity Scores > 20,000
- Also a **topical cream is available with 1 salvestrol**
- **Approximate dosages**:
  - Preventive 2,000 (1 capsule)
  - Moderate deficiency 4,000 to 8,000 (2 to 4 capsules)
  - Severe deficiency 12,000 to 20,000 (6 to 10 capsules)
  - Maintenance (history of cancer) 4,000 (2 capsules) points daily

Known Supportive Nutrients to increase CYP1B1 or help Convert Salvestrol to Metabolite

- **Iron**-Check Hgb and Ferritin; the backbone of every cytochrome P450 Enzyme contains iron
- **Magnesium**-400 mg Enhances conversion of salvestrol to metabolite that induces cancer cell death; Supports CYP1B1 activity
- **Niacin or niacinamide-100** mg twice daily; Enhances conversion of salvestrol to metabolite
- **Biotin** 1 mg to 5 mg daily-stimulates CYP1B1 production

Supportive Nutrients to increase CYP1B1 or help Convert Salvestrol to Metabolite

- **Selenium** at least 200 mcg
- **Vitamin C** 1 to 3 grams daily in divided dosage; helps with detoxification
- **Vitamin B2**
- **Oxygen is crucial for Salvestrol-CYP1B1 Activity** (attaches to iron)

Salvestrol Use in China at Renkang Hosp-Southern Med. University (Near Hong Kong)

- Oncologists Dr. Zhao and Dr. Wang began using salvestrols & have been doing this for the past 2 to 3 years
- Now, they say they **use it with all cancer patients along with conventional treatment and some other alternative treatments, such as** SPDT (Sonophotodynamic Therapy)

Dr. Zhao

Dr. Wang

Salvestrols in New Zealand from Dave Vousden-Distributor of Salvestrols

- **Began to study this in March 2012**
- Had a positive personal experience with salvestrols
- **Has worked with 23 children or adolescents with terminal cancer-mostly brain or CNS, but some with blood cancers**
- **ONLY 2 have died**
- **BUT, 21/23 are stable or improved on Salvestrols**

Salvestrols at Schachter Center for Complementary Medicine (SCCM)

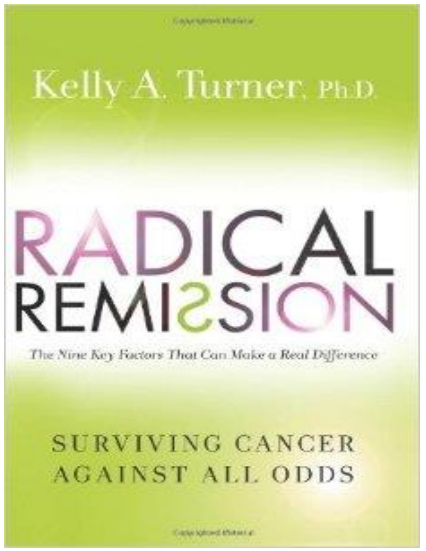
- Using them for only about 34 months; some patients using as preventive 1 or 2 capsules daily
- We estimate that 200 or 300 patients taking salvestrols at SCCM
- **No apparent side effects noted even in very sensitive people**
- **Not a panacea**: Several patients with advanced cancer have died in spite of using them
- Much more work needed to see limitations of treatment; but results so far very promising

Schachter Center Cases

- **Glioblastoma Multiforme**-living 36 months from time of diagnosis, well, working full time, brain periodic brain MRI's normal; Pao V FM, C & others
- **Lymphoma with brain involvement**-more than 3 years, living and well (No conventional Tx during this time)
- Anal melanoma after surgery-no recurrence-4 years
- **Many prostate CA and breast Ca pts** doing well

Radical Remission: **Surviving Cancer Against All Odds**

- At UCLA, Berkeley: getting PhD
- Shocked to learn no one studying "spontaneous remissions"
- Spontaneous remissions occur without help from conventional CA treatment
- 10 month trip to 10 countries to interview healers
- Interviewed 20 survivors and then 80 more; studies 1000 cases



9 Characteristics of Cancer Survivors in Radical Remission-Kelly Turner PhD

- Radically changing your diet
- Taking control of your health
- Following your intuition
- Using herbs and supplements
- Releasing suppressed emotions
- Increasing positive emotions
- Embracing social support
- Deepening your spiritual connection
- Having strong reasons for living

Our Approach to Preventing and Treating Cancer

- **Carefully evaluate pros and cons for every conventional treatment for cancer and don't accept it as a given (e.g. radiation for breast cancer or various conventional treatments for prostate CA)**
- Start with lifestyle changes, dietary changes, exercise, good sleep habits, reduction of medications when possible
- Dietary changes are crucial
- **Powerful supplements** with little negative adverse side effects

Other Procedures at the SCCM

- **Check Vitamin D status**
- Check Iodine status and optimize
- **Optimal fat soluble vitamins of D, A and K2 (MK4)**
- Monitor bone density
- Well-balanced mineral formula
- Use of probiotics
- Use of detoxification (coffee enemas, saunas, exercise)

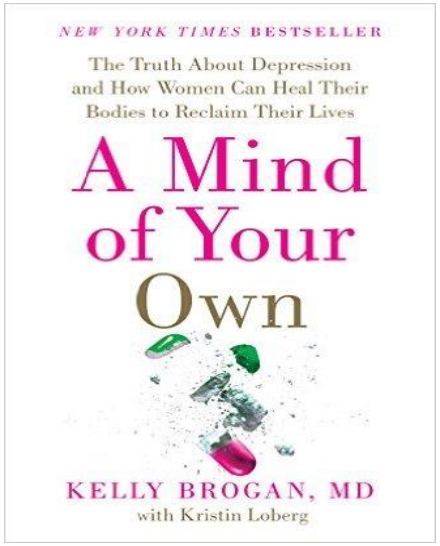
Other Procedures at the SCCM-2

- **Help patients to taper prescription drugs (especially psychotropic meds) when possible**
- Improve sleep using natural methods as much as possible. Healing take place during sleep
- Encourage exercise program, involving aerobic, stretching and strengthening
- Extensive use of supplements to optimize body functioning (Mushroom extracts, Beljanski products, many others)

Why You Should Avoid Medication:

2016 Book- *A Mind of Your Own*

- Psychiatrist-with excellent academic background: **www.kellybroganmd.com**
- Concludes that in many cases medications (especially psychiatric medications) may do more harm than good
- Emphasizes lifestyle and inflammation in the development of depression, similar to what we see in cancer
- Strategies with re-orienting yourself and tapering medications



Professors at Harvard Medical School at Mass General Hospital: Vit D Review

- Sadeq A. Quraishi MD-Anesthesiologist and Critical Care work
- Carlos Arturo Camargo Jr. MD, DrPH; Emergency Room
- **Journal of Restorative Medicine, Vol 1, Number 1;** Sept 2012; pp 9-23.
- Vitamin D and Major Chronic Illness
- Excellent review article with 123 references
- Reviewed **Pubmed-indexed articles in English from Jan 2003 to June 2012**
- **No affiliation mentioned in paper**

Vitamin D & Major Chronic Illness

- Conclusion: **Optimizing 25(OH) levels to range of 30 to 50 ng/ml is reasonable to optimize potential benefits and minimize potential risks; contrast with IOM recommendation of 20nG/ml**
- http://restorativemedicine.org/journal-viewer/?a=aHR0cDovL3d3dy5yZXN0b3JhdGl2ZWZvcm11bGF0aW9ucy5jb20vVml0YW1pbi1ELWFuZC1NYWpvci1DaHJvbmljLUlsbG5lc3M_ZnJhbWVDb250ZW50PTE&w1=650&h1=20000&t=Vitamin%20D%20and%20Major%20Chronic%20Illness

Robert P Heaney MD: Creighton University

- http://www.youtube.com/watch?v=-Za2H5oTXJY Excellent Youtube video on vitamin D
- Vitamin D: Nutrient; Not a Drug
- There have been several successful randomized trials, for different problems, including: osteoporosis, osteoarthritis, fall/neuromuscular function; insulin sensitivity, pregnancy outcomes, periodontal disease, tuberculosis and hypertension; only one clinical trial with CA
- **Plenty of clinical trials for patentable D analogues**

Studies Suggesting Link of Vitamin D Levels and Cancer

- 3,000 studies indicating that vitamin D levels associated with cancer
- 75 epidemiologic studies
- Vitamin D upregulates or downregulates about **3,000 genes (generally anti-inflammatory and anti-cancer genes)**
- Number of genes affected keeps rising!!!
- Vitamin D receptor protein with active vitamin D is necessary for producing Macrophage Activating Factor (GcMAF), **which stimulates the innate immune system to attack cancer cells**

Vitamin D and the **DINOMIT Model**

- See video: DINOMIT Theory of Cancer (17 minutes)
- http://www.youtube.com/watch?v=3GM0CnO6-ds
- Cedric Garland Dr. PH-University of CA-San Diego

- All of the following stages of cancer are affected in a positive direction by up or down regulation of genes
  - D = Disjunction: Uncoupling of Cells
  - I = Initiation
  - N = Natural selection
  - O = Overgrowth
  - M = Metastasis
  - I = Involution
  - T = Transition

Cedric Garland Dr. PH

Article: The Anticancer Effects of Vitamin K

Alternative Medicine Review; Vol. 8, No. 3; 2003

- Associate of Jonathan Wright MD
- Most interesting to me is his review of K2 (MK4), including in vitro studies, a few controlled trials and case histories
- Most supplements contain K2 (MK7) rather than MK4 (I prefer MK4)
- https://www.researchgate.net/publication/10591470_The_anticancer_effects_of_vitamin_K

Davis Lamson ND;
Colleague/Jon Wright MD

Vitamin K2 and Cancer

- **Both in vitro and in vivo studies show that Vitamin K2 (MK4) has anticancer effects**
- **K2 (MK4) inhibits cancer cell lines** of liver, colon, leukemia, lung, stomach, lymphocyte, nasopharynx, breast, oral epidermoid, osteosarcoma, glioma, leukemic blast cells
- No effect on normal bone marrow cells
- **Several impressive case reports from Japan, using MK4 in doses of 45 mg or more per day**

Evaluate Iodine Status and Supplement Carefully

- Check random urine iodine; most Americans are deficient in Iodine
- Iodine needs to be supplemented carefully
- Safe and effective protocols for iodine administration exist
- **Milligram quantities of iodine necessary for anti-cancer effects**
- See my published papers at our website for a **well referenced section on Iodine**: www.schachtercenter.com

Mirko Beljanski PhD

- Developed a **theory of cancer**; secondary structure of DNA perturbed by carcinogens
- Practical implications:
  - Oncotest for determining - carcinogenicity of substances
  - **Extracts with anti-cancer and anti-inflammatory properties (Pao V and Rovol V)**
  - **RNA primers** that increase WBCs & Platelets, which may help cancer patients undergoing chemotherapy and radiation **(Real Build)**
  - Special extract which may reduce fibrosis from radiation **(Ginkgo V)**

1923-1998

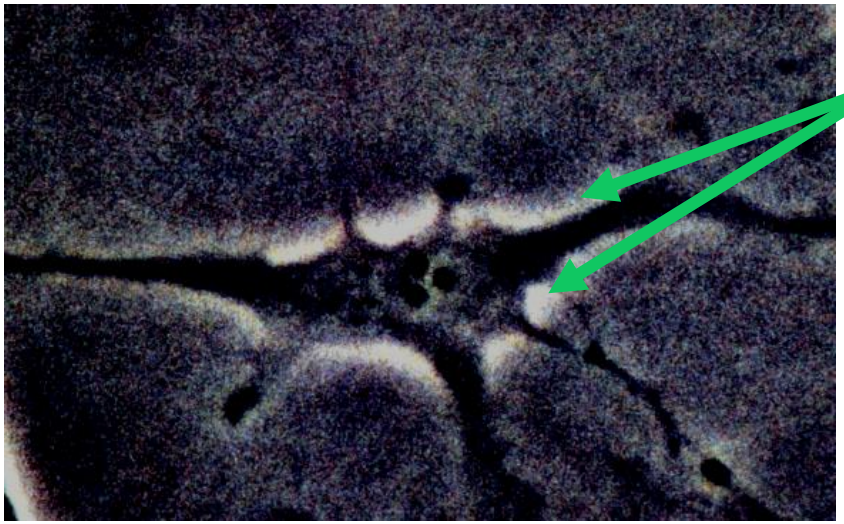
Sylvie Beljanski

Two Substances with Anti-Cancer Properties

Pao Pereira (Pao V)

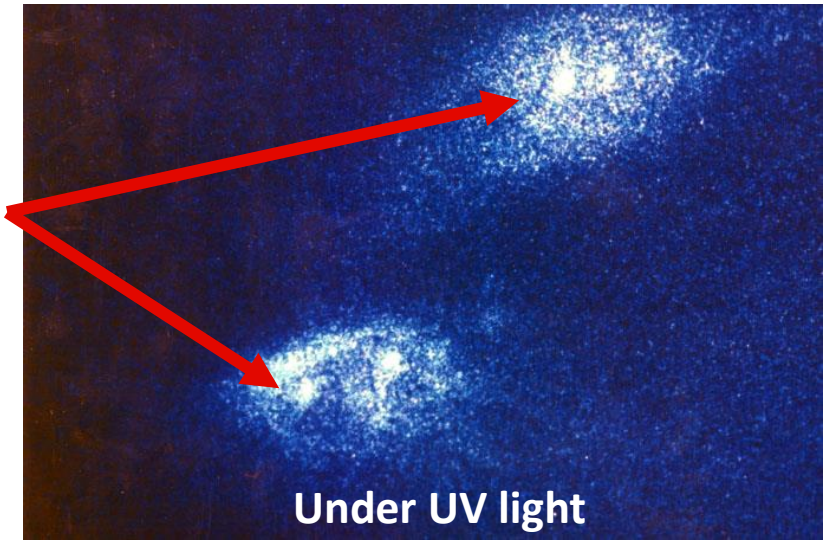
Rauwolfia Vomitoria (Rovol V)

Selectivity of Action



Naturally fluorescent, *Pao pereira* can be seen outside a healthy cell (astrocyte), unable to penetrate its non-porous membrane

The *Pao pereira* extract can be seen penetrating the cancerous cell (glioblastoma)

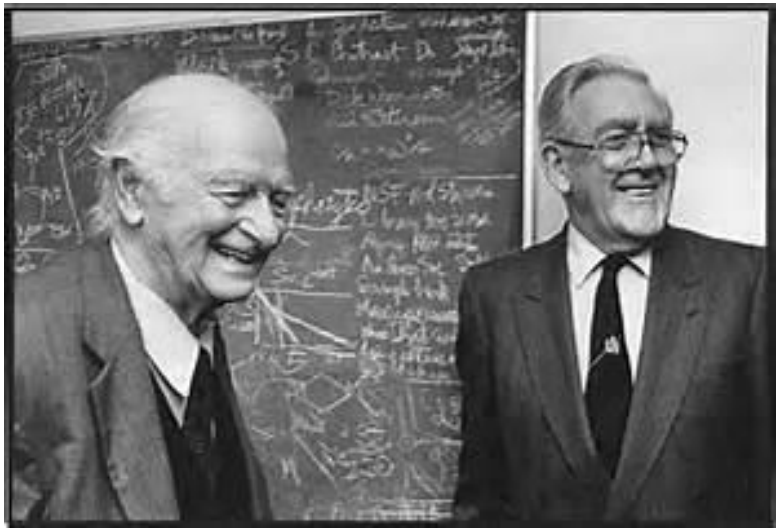


High Dose IV Ascorbate (Vit.C) Drip to Treat Cancer at Schachter Center

- **Used at our Center-more than 35 years**
- Published clinical cases show treatment plausible
- Dosage of Vitamin C-25 to 100 Grams (our usual maximum dose is 60 grams per infusion)
- Administered over 2-3 hours
- Treatment one to three times a week or more
- When used with chemotherapy-patients feel much better (we don't use chemotherapy)

Don’t Forget **High Dose Oral** Vitamin C

- https://www.csom.ca/wp-content/uploads/2013/03/Vitamin-C-and-Cancer-Is-There-A-Use-For-Oral-Vitamin-C-28.1.pdf
- http://www.peakenergy.com/news/VitaminC_Cancer_w_Comments.pdf
- http://vitamincfoundation.org/alerts.php
- 10 grams or more of C extends life of cancer patients



Linus Pauling PhD and Ewan Cameron MD: Champions of Oral C for Cancer

Bernard **Bihari** MD (1931-2010)

- In the 80's worked with heroin addicts in NYC; many had AIDS
- 1984-Naltrexone approved
- Blocks highs from heroin & alcohol in approved dose 50mg
- People felt awful because it blocked endorphins
- Discovered AIDS patients had very low endorphins (20% of NL)
- Showed **Naltrexone in doses from 1.5 to 4.5 increased endorphins** **Abbreviated LDN**

LDN results in Endorphins Enhancement & Better Immune Functioning

- Stimulates the production of opioid receptors
- **Enhances natural killer cells**
- **Improves immune functioning**
- AIDS patients lived longer
- Strong anti-cancer effect with LDN
- Dr. Bihari noted this first in a friend who had remission of lymphoma with LDN
- Subsequently, many other cancer patients responded
- Also useful for many people with autoimmune diseases, like MS and Crohn's disease

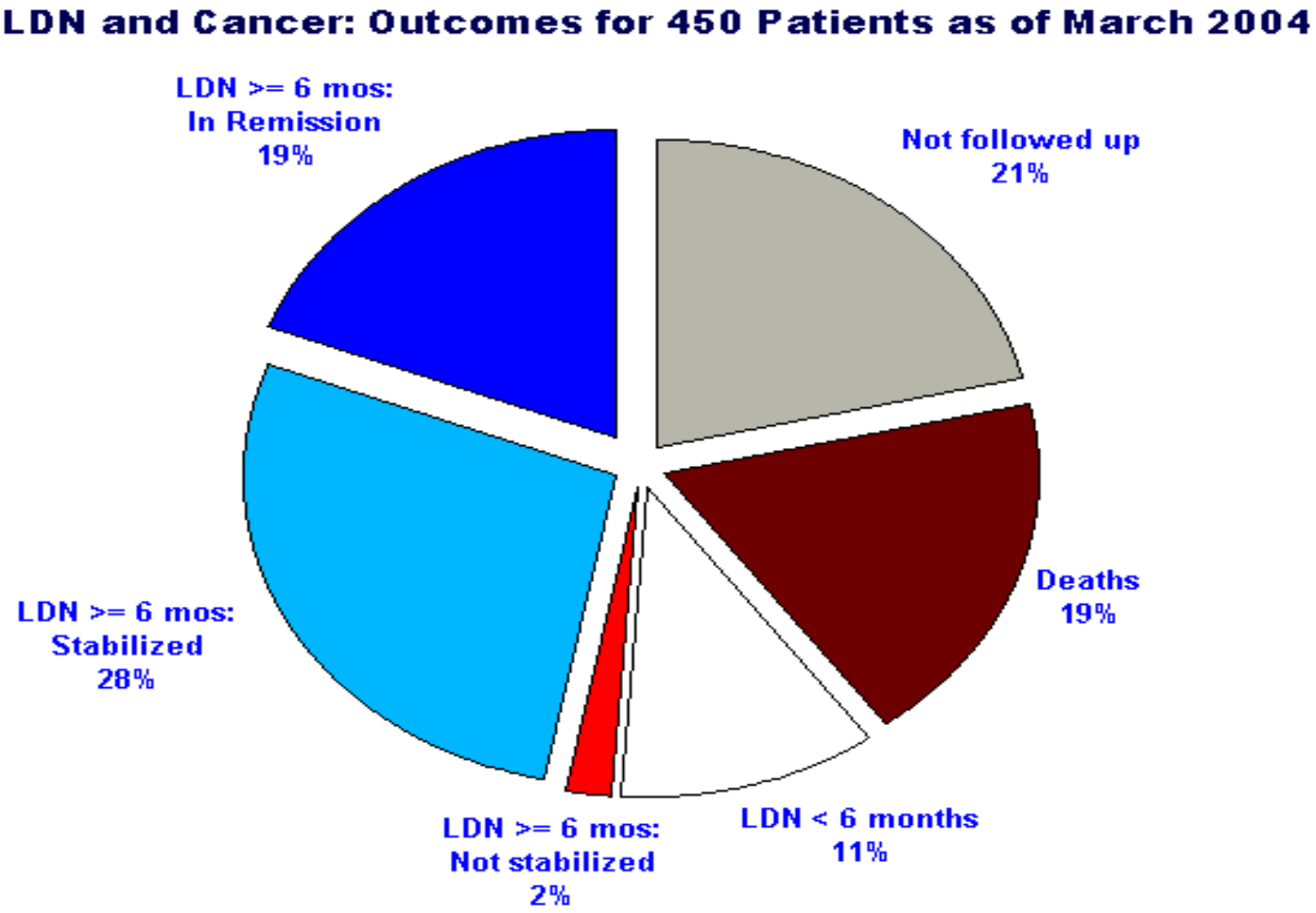
Dr. Kamau B. Kokayi Interviews Dr. Bihari September 23, 2003; WBAI; NYC

- http://www.lowdosenaltrexone.org/gazorpa/interview.html
- Great explanation of how LDN treatment evolved and the mechanisms of action

Low Dose Naltrexone

- http://www.lowdosenaltrexone.org/ Updated
- *www.ncbi.nlm.nih.gov Govt Information*
- http://www.drwhitaker.com/what-is-low-dose-naltrexone/ Article in Whitaker Newsletter 2008
- http://www.lowdosenaltrexone.org/gazorpa/interview.html This is Dr. Kokayi's transcript
- https://www.sciencebasedmedicine.org/low-dose-naltrexone-bogus-or-cutting-edge-science/ (Critical Article)

Graph of Dr. Bihari's Results with LDN for Cancer Patients

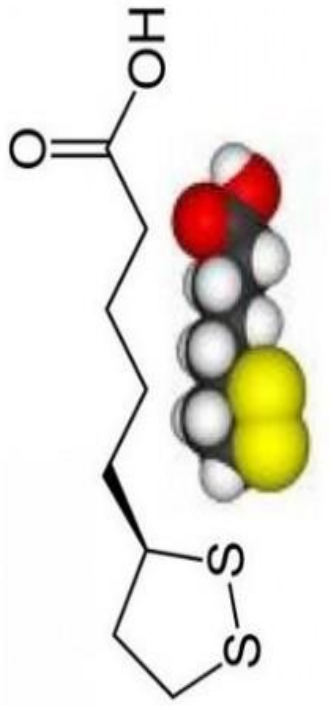


Bert Berkson MD, PhD-Alpha Lipoic Acid and Low Dose Naltrexone

- http://www.townsendletter.com/Dec2007/alphalipo1207.htm Article by Bert Berkson MD, PhD
- 1948-First discovered; 1951 structure determined
- Early 1970's used IV to treat 79 patients who had been poisoned with poisonous mushrooms (all thought to be terminal) by Bert Berkson MD, PhD; 75 of 79 recovered
- 2006-Long term survival of Pancreatic CA with mets (78 months in 2009)
- 2009-3 more cases of Pancreatic CA: good results (Ref in above article)

Structure & Functions of Alpha Lipoic Acid (ALA)

- Rate limiting step in the conversion of sugar to form ATP via the formation of CoA
- Water and fat soluble potent anti-oxidant that neutralizes free radicals
- Helps to recycles other anti-oxidants like C & E
- Chelator of toxic heavy metals as sulfhydryl groups bind to them
- Stimulate apoptosis in cancer cells at higher doses in the IV form



Protocol for Alpha Lipoic Acid and Low Dose Naltrexone for CA Patients

- Alpha Lipoic Acid (ALA) 300 to 600 mg IV twice a week
- Low Dose Naltrexone 3 to 4.5 mg orally at bedtime
- Oral ALA 300 mg twice daily
- Selenium 200 mcg orally twice daily
- Milk Thistle 300 mg 1 cap 4 times daily
- B complex (3 high dose capsules daily)

Many Other Non-Toxic Strategies

- Amygdalin=Laetrile=Vitamin B17 (can't be used with salvestrols)
- Proteolytic enzymes (Nick Gonzalez approach)
- Fermented wheat germ extract
- Essiac herbs
- Hoxsey protocol
- Energy Therapies like acupuncture, Bemer technology, Reiki, massage and others
- Many other non-toxic strategies alone or in combination

Oxygen Baths In Budapest, Hungary

- New technology that increases oxygen in tissues with 3 baths daily
- Anecdotal reports of advanced cancer patients that have recovered
- Relatively inexpensive
- http://www.kaqun.eu/products-services/bath-therapy
- May be coming to NYS; Mary Ellen Finger is resource person

National Center for Complementary and Integrative Health (NCCIH) and the National Cancer Institute (NCI)

- https://nccih.nih.gov/health/cancer/camcancer.htm
- "A substantial amount of scientific evidence suggests that some complementary health approaches may help to manage some symptoms of cancer and side effects of treatment. For other complementary approaches, the evidence is more limited"
- **Unproven products or practices should not be used to replace or delay conventional medical treatment for cancer.**

How Far Can We Go With a Minimum Amount of Conventional Tx?

- Insights of "Radical Remission"
- Knowledge of **nutrition, detoxification, exercise and stress management**
- New insights involving **cancer stem cells**
- Awareness that entire medical system and research today is fueled by **profits and patentable approaches (No Clinical Trials involving these alternative approaches and Double-Blind Placebo Trial may not be possible)**
- Needs to be awareness of practitioners and patients of the true science-Individual responsibility

Summary

- More and more patients are becoming **educated as to options** regarding a cancer prevention and treatment program
- Many are choosing to forego the standard of care with careful monitoring
- We attempt to help educate the patient and partner with them to navigate their care
- **See handout for more information, details and some important links**

Schachter Center on 2nd Floor; Suffern NY in Rockland County-45 min from NYC: 845-368-4700