Healing is Voltage®

Jerry Tennant, MD, MD(H), PScD
Healing is Voltage (Energy)

1. Root canal in Upper molar
2. Muscle battery flips polarity
3. Breast Cancer (Placenta)
Healing is Voltage® Oxygen and Cancer
Tennant Institute is a Private Expressive Association, as defined by law, and is under the direction of Jerry Tennant, MD, MD(H), PScD.

This lecture is given under the auspices of my Arizona MD(H) license and NOT my Texas MD license, partially with the support of a contribution by Senergy Medical Group.

Participation in the seminar implies that the participant has given an acknowledgement of rights noted above and others recognized by law, and asserts first, ninth and fourteenth Amendment rights. Participation means, “I voluntarily license Jerry Tennant, MD, MD(H), PScD to counsel me with his Arizona MD(H) license.”
The concepts presented here were contributed to by many but particularly the following:

Elena Marr, BCND, CNHp
Gregory Hyde, MD, PhD
Amy Marshall, DNP, FNP-C

Tennant Institute Staff
Disclosure

Dr. Tennant likely has a proprietary interest in any medical device or product that has the name “Tennant®“.
Incidence of Cancer in the U.S.
To understand the statistics of cancer, you must understand the difference between “relative risk reduction” and “absolute risk reduction”.
The Illusion of Certainty: Health Benefits and Risks

Ed Bouwer
Co-author: Erik Rifkin
Department of Geography and Environmental Engineering
Johns Hopkins University
Baltimore, Maryland

October 29, 2009
Absolute Risk and ARR

- **Absolute risk** is your risk of developing a disease over a specified period of time.
- **Absolute risk** reflects the number of people who will be harmed compared to the total number of people being considered.
  - If 6 out of 100 get a disease and die, the A.R. is 6/100 or 0.06 or 6%.

- **Absolute Risk Reduction** is the difference between two absolute risks in two groups
  - In the above example, if people take a drug and only 4 out of 100 get the disease and die, the ARR is 6% - 4% = 2%. Two lives are saved out of 100.

- **ARR** compares the number of people who will benefit from intervention to the total number of people being considered.
Relative Risk Reduction

- Assume 6/100 people have athlete’s foot. That is 6%.
- Now assume we give them green jelly beans and only 3/100 have athlete’s foot.
- That is a 3% Absolute Risk Reduction because 6% - 3% is 3%.
Relative Risk Reduction

- However, it will be reported as a 50% RR because 3% is 50% of 6%!

- Now assume you make the numbers in the study larger. Let’s say you had 6/10,000 (0.06%) and reduced it to 3/10,000 (0.03%).

- The Absolute Risk Reduction is 0.06-0.03 = 0.03%.

- However, it will still be reported as a 50% RR because 0.03 is 50% of 0.06!
Incidence of Cancer in the U.S.
Trends in the Number of Cancer Deaths Among Men and Women, US, 1930-2006

We are NOT reducing death from cancer

- The American Cancer Society’s annual Cancer Statistics article reports that the overall death rate from cancer in the United States in 2007 was 178.4 per 100,000 (0.178%), a relative decrease of 1.3 percent from 2006, when the rate was 180.7 per 100,000 (0.1807%), continuing a trend that began in 1991 for men and 1992 for women.

- Note that the absolute reduction was 0.1807 - 0.1784 = 0.23%! (23/10,000).

- The relative reduction was 1.3%.
### Estimated Number* of New Cancer Cases and Deaths by Sex, US, 2014

<table>
<thead>
<tr>
<th></th>
<th>Estimated New Cases</th>
<th>Estimated Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Both Sexes</td>
<td>Male</td>
</tr>
<tr>
<td>All Sites</td>
<td>1,665,540</td>
<td>855,220</td>
</tr>
</tbody>
</table>
Age-Adjusted Cancer Death Rates,* Males by Site, US, 1930-2002

*Per 100,000, age-adjusted to the 2000 US standard population.
Note: Due to changes in ICD coding, numerator information has changed over time. Rates for cancer of the liver, lung and bronchus, and colon and rectum are affected by these coding changes.


American Cancer Society, Surveillance Research, 2006
Age-Adjusted Cancer Death Rates,* Females by Site, US, 1930-2002

*Per 100,000, age-adjusted to the 2000 US standard population. †Uterus cancer death rates are for uterine cervix and uterine corpus combined.

Note: Due to changes in ICD coding, numerator information has changed over time. Rates for cancer of the lung and bronchus, colon and rectum, and ovary are affected by these coding changes.

Results from Chemotherapy
Mustard gas was used in WWI. It destroyed bone marrow. In 1942, Lewis Goodman and Alfred Gilman rediscovered mustard gas and considered using it for blood cancers. With knowledge that the compound depleted white blood cells, the pharmacologists experimented with intravenous injections on a terminally ill lymphosarcoma patient in Gustaf Lindskog's care. Though the tumor regenerated and killed the patient, the drug’s success in briefly eliminating the tumor is considered a historic accomplishment in chemotherapy treatment, and the compound is still used as a chemotherapeutic agent.
Sidney Farber spent much of his life trying to find a cure for acute leukemia in children. In 1948, he used chemotherapy to treat a boy (Robert Sandler) with aminopterin on December 28, 1947 at Boston Children’s Hospital. The boy went into remission but he died April 2, 1949, approximately 2 1/2 years after his treatment.

Despite Goodman using chemotherapy in 1941, seven years before Farber, Farber is considered the father of chemotherapy.
## Effectiveness of Chemotherapy Drugs

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Brand Name</th>
<th>Company</th>
<th>Indications</th>
<th>Approval Date</th>
<th>Median Time to Death (months)</th>
<th>Advertised Survival</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>anastrozole</td>
<td>Arimidex</td>
<td>Zeneca</td>
<td>Breast IV</td>
<td>1996</td>
<td>26.7</td>
<td>56.1%</td>
<td>Cancer 1998;83:1142-1152</td>
</tr>
<tr>
<td>capecitabine</td>
<td>Xeloda</td>
<td>H-LaRoche</td>
<td>Breast IV</td>
<td>1998</td>
<td>12.8</td>
<td>4%</td>
<td>J Clin Oncol 1999;17:485</td>
</tr>
<tr>
<td>docetaxel</td>
<td>Taxotere</td>
<td>Aventis</td>
<td>Breast IV, Lung IV</td>
<td>1996</td>
<td>15.0</td>
<td>4%</td>
<td>J Clin Oncol 1996;14:58-65</td>
</tr>
<tr>
<td>doxorubicin</td>
<td>Adriamycin</td>
<td>Pharmacia</td>
<td>Breast II</td>
<td>2003</td>
<td>14.0</td>
<td>6%</td>
<td>Clin Oncol 1999;17:2341-54</td>
</tr>
<tr>
<td>fluorouracil</td>
<td>Adrucil</td>
<td>ICN Puerto Rico</td>
<td>Colon IV</td>
<td>1962</td>
<td>8.5</td>
<td>5%</td>
<td>Lancet 1998;352:1407-1412</td>
</tr>
<tr>
<td>fluorouracil</td>
<td>Adrucil</td>
<td>ICN Puerto Rico</td>
<td>Pancreatic</td>
<td>1962</td>
<td>4.2-5.5</td>
<td>5%</td>
<td>J Clin Oncol 1997;15:2403-2413</td>
</tr>
<tr>
<td>gemcitabine</td>
<td>Gemzar</td>
<td>Lilly</td>
<td>Breast IV</td>
<td>1996+</td>
<td>15.2</td>
<td>5.8%</td>
<td>Anticancer Drugs 1999;10:155-62</td>
</tr>
<tr>
<td>gemcitabine</td>
<td>Gemzar</td>
<td>Lilly</td>
<td>Pancreatic</td>
<td>1996+</td>
<td>5.6</td>
<td>6%</td>
<td>Invest New Drugs 1994;12:1229</td>
</tr>
<tr>
<td>irinotecan</td>
<td>Campstox</td>
<td>Pharmacia</td>
<td>Colon IV</td>
<td>1996</td>
<td>10.8</td>
<td>6%</td>
<td>Lancet 1998;352:1407-1412</td>
</tr>
<tr>
<td>letrozole</td>
<td>Femara</td>
<td>Novartis</td>
<td>Breast IV</td>
<td>1997</td>
<td>25.3</td>
<td>5%</td>
<td>Pharmacoconomics 1999;16:379-97</td>
</tr>
<tr>
<td>megestrol acetate</td>
<td>Megace; Depo-provera</td>
<td>Bristol Meyers Squibb; Pfizer</td>
<td>Breast IV</td>
<td>1971</td>
<td>22.5</td>
<td>5%</td>
<td>Cancer 1998;83:1142-1152</td>
</tr>
<tr>
<td>mitoxantrone</td>
<td>Novatrone</td>
<td>Immunex</td>
<td>Prostate (pain)</td>
<td>1996</td>
<td>No improvement</td>
<td>5%</td>
<td>J Clin Oncol 1996;14:1754-64</td>
</tr>
<tr>
<td>rituximab</td>
<td>Rituxan</td>
<td>Genentech</td>
<td>Lymphoma</td>
<td>1997</td>
<td>11.6</td>
<td>3%</td>
<td>Blood 1998;92:414a-415a</td>
</tr>
<tr>
<td>temozolomide</td>
<td>Temodar</td>
<td>Schering</td>
<td>Brain (Astrocytoma)</td>
<td>1999</td>
<td>4.6</td>
<td>6%</td>
<td>Eur J Cancer 1996;32A:2236-41</td>
</tr>
<tr>
<td>trastuzumab</td>
<td>Herceptin</td>
<td>Genentech</td>
<td>Breast IV</td>
<td>1998+</td>
<td>5.1</td>
<td>6%</td>
<td>Semin Oncol 1999;265:78-83</td>
</tr>
</tbody>
</table>

* Approved for use in combination with other drugs

**Average of Median Time to Death in Months:** 7.6
Clin Oncol (R Coll Radiol). 2004 Dec;16(8):549-60. The contribution of cytotoxic chemotherapy to 5-year survival in adult malignancies.; Morgan G1, Ward R, Barton M.

“The overall contribution of curative and adjuvant cytotoxic chemotherapy to 5-year survival in adults was estimated to be 2.3% in Australia and 2.1% in the USA.”

It is obvious that a therapy that only has a 2-3% success rate is the wrong paradigm!
Mutated Genes

Theodor Heinrich Boveri was a German biologist. He also reasoned in 1902 that a cancerous tumor begins with a single cell in which the makeup of its chromosomes becomes scrambled, causing the cells to divide uncontrollably. He proposed carcinogenesis was the result of aberrant mitoses and uncontrolled growth caused by radiation, physical or chemical insults or by microscopic pathogens.
Genetics Do NOT Control Cancer

Thomas Seyfried removed the nucleus containing the mutated genes from a cancer cell and replaced it with a normal nucleus. He assumed that the cell would then become normal since it had normal genes. It did not. It stayed malignant. He then did the opposite. He removed the nucleus from a normal cell and inserted a cancerous nucleus. The cell stayed normal. This was repeated by others. Thus one could see that it wasn’t mutated genes that was driving the malignancy.

Cancer’s Off Switch
Blastema (Stem Cell) Theory

In 1838, Johannes Müller: a German pathologist, published *On the Nature and Structural Characteristics of Cancer, and of Those Morbid Growths Which May Be Confounded with It*. He noted that cancer is a collection of cells and was perhaps the first to publish that cancer arose from the blastema (stem cells), between normal tissues. Note the similarities to the work of John Beard published in 1902, *The Body Electric* by Robert Becker in 1985, and to the article quoted below from 2008.

*Curr Stem Cell Res Ther. 2008 Jan;3(1):53-4.; Stem cells and blastema cells.; Tsonis PA*
Pregnancy and a Placenta

• The blood supply to the uterus is not adequate to supply the voltage, oxygen, and nutrients necessary to support a growing fetus.

• To supply these needs, stem cells create a new system. Blood vessels invade the wall/vessels of the uterus, creating a new blood supply. It then creates a tumor (placenta) that can protect the fetus from the immune system of the body. The placenta produces nagalase to confound the mother’s GcMAF to turn off macrophages so they won’t attack the placenta or the fetus.
Trophoblast (Stem Cells)

• The placenta begins forming as the outer or “trophoblastic” layer around the early embryo, at about its 58 cell stage.

• Trophoblast means “nurturing tissue”

• Trophoblasts are indistinguishable from cancer cells.

• Trophoblasts are stem cells.
Placenta

The growing placenta efficiently creates a new and dense blood supply to feed itself and the emerging embryo—just as any expanding tumor must, as angiogenesis research today has made clear.
Placenta vs Cancer

• The trophoblastic placenta—though initially resembling a malignancy in looks and behavior—at a critical and precise point transforms from an undifferentiated, highly invasive, rapidly growing, angiogenic tumor-like tissue, into the mature non-aggressive, non-proliferating, life-sustaining placenta.

• Normal trophoblasts seem to know just when to stop replicating and invading, whereas malignant cells do not.
Abstract

Implantation of the embryo is one of the last great mysteries of reproductive biology. There are striking similarities present between the behavior of invasive placental cells and that of invasive cancer cells. In this review, we propose that cellular mechanisms used by the cells of the placenta during implantation are reused by cancer cells to invade and spread within the body. Integrins and other cell adhesion molecules, extracellular matrix and matrix metalloproteinases all appear to be involved and are regulated by the complex endocrine, autocrine and paracrine milieu within the uterus.
Hum Reprod Update. 2007 Mar-Apr;13(2):121-41. Epub 2006 Oct 26.: Molecular circuits shared by placental and cancer cells, and their implications in the proliferative, invasive and migratory capacities of trophoblasts.; Ferretti C1, Bruni L, Dangles-Marie V, Pecking AP, Bellet D.

Abstract

Trophoblast research over the past decades has underlined the striking similarities between the proliferative, migratory and invasive properties of placental cells and those of cancer cells. This review recapitulates the numerous key molecules, proto-oncogenes, growth factors, receptors, enzymes, hormones, peptides and tumour-associated antigens (TAAs) expressed by both trophoblastic and cancer cells in an attempt to evaluate the genes and proteins forming molecular circuits and regulating the similar behaviours of these cells.
Among the autocrine and paracrine loops that might be involved in the strong proliferative capacity of trophoblastic and cancer cells, epidermal growth factor (EGF)/EGF receptor (EGFR), hepatocyte growth factor (HGF)/HGF receptor (HGFR) (Met) and vascular endothelial growth factor (VEGF)/VEGF receptor (VEGFR) loops may play a predominant role. Similar mechanisms of migration and invasion displayed by trophoblastic and malignant cells comprise alterations in the adhesion molecule phenotype, including the increased expression of alpha1beta1 and alphavbeta3 integrin receptors, whereas another critical molecular event is the down-regulation of the cell adhesion molecule E-cadherin. Among proteases that may play an active role in the invasive capacities of these cells, accumulating evidence suggests that matrix metalloproteinase-9 (MMP-9) expression/activation is a prerequisite. Finally, an overview of molecular circuitries shared by trophoblast and cancer cells reveals that the activation of the phosphatidylinositol 3'-kinase (PI3K)/AKT axis has recently emerged as a central feature of signalling pathways used by these cells to achieve their proliferative, migratory and invasive processes.
Placenta vs Cancer

• The very day the embryonic pancreas came to life, first secreting its varied collection of enzymes, the placenta changed direction, stopping its cancer-like invasion of the maternal uterus.

• Trypsin, the main proteolytic enzyme, served to control placental growth and prevent the tissue from invading beyond the uterus as a true cancer might.

• Beard said, “Trypsin alone, a most deadly remedy for cancer if employed without abundant amylopsin (amylase), is mentioned.”
Amylase

- Amylase is not produced in the human fetal pancreas gland until some months after birth. There is a near absence of amylase in the uterus during all of fetal life.

- Amylase controls eclampsia, a deficiency of amylase in the mother’s blood.

- Treating with trypsin without the use of amylase may result in toxemia.
Amylase in Infants

Infants have low levels of pancreatic amylase, the workhorse of starch digestion in adults. Research in the 1960’s and 1970’s showed that pancreatic amylase activity, measured in samples of fluid from the small intestine, is almost non-existent in newborns. Activity starts to increase within the first six months, however, and continues ramping up throughout childhood. By four to six months, when many babies are introduced to starch in the form of cereals, there is some pancreatic amylase activity, but still much less than that found in older children and adults.
Amylase and Placentas

It is likely that the amount of amylase in the uterus controls the amount of GcMAF present and thus the activity of the immune system attacking the placenta. Since there is little amylase in the uterus, there is little GcMAF and thus the immune system is less likely to attack the placenta.

In addition, the placenta is surrounded by nagalase, a protein that shuts down the function of GcMAF, further protecting it from damage by the mother’s immune system.

It is also likely that the amylase in mother’s blood stops the invading placenta from extending outside the uterus.
Theoretical Explanation of Enzymes and Cancer
Gc-MAF/Nagalase

Gc-MAF (or (glycoprotein macrophage activating factor) is an immunomodulatory protein. MAFs are lymphokines that control the expression of antigens on the surface of macrophages, and one of their functions is to make macrophages (blood cells) become cytotoxic to tumors.

Three out of four of the original studies authored by Yamamoto (published between 2007 and 2009) were retracted by the scientific journals in which they were published in 2014, officially due to irregularities in the way ethical approval was granted, but not because the results were incorrect.
Nagalase

Nagalase is a protein made by all cancer cells and viruses (HIV, hepatitis B, hepatitis C, influenza, herpes, Epstein-Barr virus, and others). Its formal, official chemical name is alpha-N-acetylgalactosaminidase. GcMAF finds and attaches to receptors on the macrophage cell surface, and then sends a chemical signal that activates the macrophage, telling it to locate and destroy cancer cells and viral particles. Cancers and viruses have found a way to defeat this process. They make and release Nagalase, an enzyme that blocks the production of GcMAF. Without GcMAF, the immune system literally goes to sleep. Macrophages stop tracking down and killing pathogens.

Nagase is also made by the placenta to protect it from being destroyed and to protect the fetus from being attacked by the mother’s immune system since half of the fetal tissue is from the father.

Macrophages inactivated by nagalase blocking GcMAF
Theoretically Trypsin Can Destroy Nagalase (protein)
GcMAF is made by removing sugars from vitamin D-binding protein (amylase?)
GcMAF is made by removing sugars from vitamin D-binding protein (amylase?)
Amylase activates GcMAF

Placenta or Cancer covered with nagalase

Trypsin destroys nagalase
In pregnancy, as invading blood vessels from the placenta reach mother’s blood supply, her amylase activates GcMAF to stop the invasion and switches polarity to tell the stem cells to stop.

The amount of amylase mother has is dictated by stomach acid (blocked by stomach acid drugs (e.g. Prilosec) that tells the pancreas to make it.
The placenta has two functions: to nourish and to protect the fetus. Crucial for these functions are specialized fetally derived cells (trophoblasts), which differentiate into distinct subpopulations. Two trophoblast subpopulations are in direct contact with maternal blood and tissues: extravillous trophoblasts (EVT) and syncytiotrophoblasts (SYN). EVT invade the uterine implantation site where they are juxtaposed to maternal immune cells, suggesting that they play a role in facilitating tolerance of the fetal allograft. The SYN is bathed in maternal blood and is specialized to facilitate gas, nutrient and waste exchange between maternal and fetal circulation.

http://www.bakardjievlab.org/images/placenta_research.png
Cancer and Amylase

When you have a cancer (placenta) in one acupuncture circuit, its ability to move to adjacent tissue is controlled in part by the amount of amylase present in the blood supply of that tissue and the availability of vitamin D3 binding protein to make GcMAF. Amylase levels are controlled by whether you are making stomach acid and whether your pancreas has enough voltage to make it. Thus you must stop drugs that shut down your stomach acid.
Otto Warburg showed that cancer cannot exist in the presence of oxygen.

The amount of oxygen in a cell is dictated by the voltage of the cell.

As oxygen drops, cell wall deficient fungus appears and begins to damage cells.
How Does the Body Know a Woman is Pregnant and Needs a Placenta?
Sperm, in the presence of high levels of estrogen, open pores and dump out $H^+$, changing polarity!
The Signal for Stem Cells to Make a Placenta is a Reversal of Polarity

When any rechargeable battery is drained to zero, it reverses its polarity.

Compare that to the polarity reversal that occurs when sperm are in the presence of estrogen—they open pores and dump H+ to reverse their polarity. This is the signal for stem cells to make a placenta.
All Cancers are Placentas Attempting to Provide an Acupuncture Circuit with the Missing Voltage, Oxygen and Nutrients
Nordenstrom used a Bovie cautery to destroy tumors by placing one needle in the tumor and one nearby.

Lakhovsky, Nordenstrom, Rife and Becker are the giants of electro-medicine upon whose shoulders all of us interested in electro-medicine stand.
Keith Brewer showed that cancer occurs when you lower the voltage from pH of 7.4 (-25 mV) to a pH of 6.5 (+30 millivolts). He was unaware that this was when the voltage changed polarity.
Healing is Voltage
Cancer’s On/Off Switches

Cancer is the only response the body can do for severe hypoxia caused by draining an acupuncture muscle battery pack to zero. This flips its polarity, telling stem cells to make a placenta (cancer) in an effort to keep the organ functioning.
Muscle Battery Packs

Sympathetic/Parasympathetic   Lung/Large Intestine   Heart/Small Intestine
Spleen/Stomach                 Kidney/Bladder           Liver/Gall Bladder

These images are in the book *Healing is Voltage, Acupuncture Muscle Batteries*
\[
\text{CO}_2 + \text{H}_2 \text{O} \rightleftharpoons \text{H}_2 \text{CO}_3 \rightleftharpoons \text{HCO}_3^- + \text{H}^+
\]

Carbon Dioxide + Water ⇔ Carbonic Acid ⇔ Bicarbonate ion + Hydrogen
Dissolved Oxygen Meters

- Galvanic Sensor

- A galvanic sensor acts as a battery and is able to generate power without external voltage. Galvanic probes contain an anode and cathode in an electrolyte. Oxygen enters the electrolyte via a membrane, which generates voltage between the anode and cathode. This difference in potential voltage is used to measure the amount of dissolved oxygen.
Oxygen, Carbon Dioxide and Voltage

- Humans breathe in oxygen and breathe out carbon dioxide. This process sounds simple, but the details are actually quite complex. During the process of breathing, humans convert sugar into energy. Carbon dioxide is a waste product of this process. Carbon dioxide is released into the blood, travels to the lungs and is exhaled. Because carbon dioxide is a weak acid (electron stealer), the more carbon dioxide in the blood, the more acidic the blood becomes (the lower the voltage).

Carbon Dioxide

• Carbon dioxide has the chemical formula CO$_2$. This means that for every one molecule of carbon, there are two molecules of oxygen. When dissolved in water, carbon dioxide forms carbonic acid, H$_2$CO$_3$. Carbon acid can lose two hydrogen atoms, or protons. The loss of protons in a solution is what makes that solution acidic (low voltage).
The carbonate buffer system controls the pH levels (voltage) in blood. **pH is a measurement of voltage in a liquid.** The lower the pH, the more acidic a solution is. Carbon dioxide is an essential part of the carbonate buffer system. When carbon dioxide is dissolved in the blood, it creates a buffer composed of bicarbonate ions, $\text{HCO}_3^-$, carbonic acid, $\text{H}_2\text{CO}_3$, and carbon dioxide, $\text{CO}_2$. All three exist in equilibrium with each other. The carbonic acid part of the buffer can neutralize hydroxide ions, which increases the pH (voltage) of the blood, while the bicarbonate part of the system can neutralize hydrogen ions, which decreases the pH of the blood (lowers voltage).

$$\text{CO}_2 + \text{H}_2\text{O} \rightleftharpoons \text{H}_2\text{CO}_3 \rightleftharpoons \text{HCO}_3^- + \text{H}^+$$

**Carbon Dioxide + Water ⇌ Carbonic Acid ⇌ Bicarbonate ion + Hydrogen**
Cellular Respiration

- During cellular respiration, humans breathe in oxygen. The body uses this oxygen as part of the process of converting sugar and other molecules into energy. A waste product of this process is carbon dioxide. Carbon dioxide is released into the blood. As the levels of carbon dioxide increase, the equilibrium of the carbonate buffer shifts. More carbonic acid $\text{H}_2\text{CO}_3$ is made, which then increases the acidity (lowers the voltage) of the blood.
Regulation of Blood Acidity
(Voltage)

• Because the release of carbon dioxide into the blood shifts the carbonate buffer equilibrium, the body needs to remove the excess carbon dioxide in order to regulate the pH level (voltage). Therefore, blood carries the carbon dioxide to the lungs where it is exhaled. The speed and depth of breathing regulates the amount of carbon dioxide that is exhaled. Faster, deeper breathing exhales more carbon dioxide.
Acidosis and Alkalosis
(Low Voltage and High Voltage)

The regulation of the pH of the blood is a precise process. When the blood has too much or two little acid, the results are known as acidosis (low voltage) and alkalosis (high voltage), respectively. Lung or breathing disorders can cause respiratory acidosis and respiratory alkalosis through a dysregulation of the amount of carbon dioxide exhaled during respiration. Too little carbon dioxide exhaled will increase the acidity (lower the voltage) of the blood, whereas too much carbon dioxide exhaled will decrease the acidity (increase voltage) of the blood.
Oxygen and Hemoglobin

1) High pCO2 – Low Voltage
2) Normal pCO2 – Normal Voltage
3) Low pCO2 – High Voltage

Bohr Effect

Oxygen %Saturation
O₂ level in arterial blood
O₂ level in venous blood

© 2010 Jerry Tennant
Hyperbaric Oxygen and Cancer

• The amount of oxygen that can enter a cell is dictated by the voltage of the cell.

• Since voltage controls, in part, the amount of oxygen that can dissolve in a solution, hyperbaric oxygen alone cannot be expected to have a significant effect on cancer unless one corrects the voltage and the polarity of the acupuncture muscle battery pack involved.

• One must identify the reason the battery pack lost its charge—most commonly a dental infection plus additional electron stealers causing reversed polarity.
Spleen
Spleen Meridian

Stomach Meridian
Spleen

Abductor hallucis

Soleus
Spleen

- Longissimus
- Latissimus dorsi
Spleen BioTerminals

T12 @ Erector spinae
Spleen

Longissimus (Spleen)
Spleen/Stomach Connection

- Lateral pterygoid (Stomach)
- Longissimus capitus (Spleen)
Stomach
Stomach
Spleen to Stomach

- Masseter (Stomach)
- Orbicularis oculi (Stomach)
- Longissimus (Spleen)
- Platysma (Stomach)
Stomach Meridian to Macula

- Lateral pterygoid (Stomach)
- Medial pterygoid
- Longissimus (Spleen)
Stomach

- Pectoralis major
- Rectus abdominus
- Inguinal ligament
- Quadriceps
- Tibialis anterior
Stomach BioTerminals

- Pectoralis major
- Rectus abdominus
Stomach at Knee

- Rectus femoris
- Tibialis anterior
Tibialis Anterior to Extensor Hallucis Longus
Stomach

- Tibialis Anterior
- Extensor Hallucis Longus
- Extensor Hallucis Brevis
Dental Infections Act Like Circuit Breakers
| Acu meridian Tooth-Organ Relationships [with Autonomic Neuropeptide Emotion correlations] -- from various sources Dr. Ralph Wilson, N.D. | Chapters |

% Invaded Tubules: 1.1  39.0

(Brown-Brenn stain, x200 magnification)
Emotions are Stored as Magnetic Fields and Can Block a Circuit
The Balance of Electrons Consumed/Generated vs. Electrons Used/Stolen
- Dental Infections
- Hypothyroid
- Scars
- Emotions
- Toxins
- Smoking
- Pesticides
- Pharmaceuticals
- Processed food
- GMO foods
- Chemotherapy
- Radiation
- Vaccines

- Ozone
- Alkaline water
- Uncooked food
- Sunshine
- Touching the earth, sand, ocean
- Moving water
- Touching another living thing
- Love
- Remove scars, dental infections, emotions
The Cellular Voltage
According to Dr. Jerry Tennant
“The Tesla Circuit Concept”

1. Sport or movement stresses the muscles & bones against gravity or a resistant force.

2. Muscles & bones have piezoelectric properties causing the generation of electricity & voltage (Battery).

3. The electric current generated by muscles flows via the body’s fascial planes (Meridians).

4. The internal organs are supplied by this electric current (Tesla circuit).

5. Electrons flow through the collagen in the extracellular matrix & enter the cell via the “Integrin” receptors.

6. Electrons charge the cell membrane, which is the “Battery” of the cell (Voltage).

7. Electrons from the cell membrane & the extracellular matrix flow via the cytoskeleton to the mitochondria, where they participate in the electron transport chain to increase ATP production (Voltage).

8. DNA contains its own battery.

Circuits Pass Through Teeth
Cancer: Polarity
The On-Off Switches
Thomas Seyfried in his book *Cancer is a Metabolic Disease* showed that genetic changes are secondary to low voltage (low ATP) in the cells secondary to mitochondrial damage.
The “On Switch” for Cancer is Draining a Muscle Battery to Zero

Muscle Battery

Drain to zero causes reversal of polarity

Stem Cell

Placenta (Cancer)
Tennant THEORY of Cancer

1. I think the trophoblasts that make a placenta are the same as totipotent stem cells.
2. I think cancer only occurs from totipotent stem cells; not from normal cells.
3. I think all cancers (with perhaps the exception of blood cancers) are the body’s attempt to make a placenta—even in men.
4. All meridians contain stem cells. The organs on that circuit are at risk to develop cancer (try to make a placenta) when that circuit’s voltage flips.

5. I think that the switch that tells totipotent cells to make a placenta is a reversal of polarity from -25 millivolts to +30 millivolts.

6. The thing that is most likely to produce enough electron stealers to reverse the polarity is a dental infection.
Tennant THEORY of Cancer

7. Other things that can steal enough electrons to reverse the polarity are radiation, chemotherapy, pesticides, hydrocarbons, asbestos, perhaps starvation, etc.

8. The lower your voltage is from hypothyroidism, adrenal fatigue, lack of fulvic, and lack of NO, the less of the other toxins you need to flip polarity.

9. The switch that tells the body to stop making a placenta is enough electrons to flip the polarity back to normal. In the pregnant female (and in the cases reported by Beard, Stricker, Kelley, and Gonzales) it is amylase (allowing the production of GcMAF’s and raising the voltage/oxygen), the most alkaline thing the body makes.
10. The low voltage causes pain, lack of ATP, lack of oxygen, and cell-wall deficient microorganisms (mycelial fungus is always present with cancer).

11. Fungal secretions and peroxynitrites damage the mitochondria.

12. As far as I can tell, all of the things reported to cure cancer, from herbs to swimming with the dolphins, are electron donors.
13. I think the reason we have more cancers than we used to are toxins, genetically modified foods, use of stomach acid blocking drugs, statin drugs (block needed cholesterol sulfate production) and they didn’t have root canals in the past.

14. I don’t think one can ever overcome the toxins from a root canal with anything—it must be removed and the infected bone cleared.
NOTE

It is possible that Beard was wrong that it was the production of fetal pancreatic enzymes that halted the invasion of the stem cells making a placenta. More recent studies show that the fetal pancreas makes almost no amylase and little trypsin. His comments about the roles of amylase vs trypsin are confusing. He was unaware of the interaction between GcMAF and nagalase.

If it is correct that amylase activates GcMAF’s to attack the cancer/placenta and that trypsin can dissolve the nagalase that protects the cancer/placenta, we can understand the effects seen by Beard, Stricker, Kelley, and Gonzales.
- Dental Infections
- Hypothyroid
- Scars
- Emotions
- Toxins
- Smoking
- Pesticides
- Pharmaceuticals
- Processed food
- GMO foods
- Chemotherapy
- Radiation
- Vaccines

- Ozone
- Alkaline water
- Uncooked food
- Sunshine
- Touching the earth, sand, ocean
- Moving water
- Touching another living thing
- Love
- Remove scars, dental infections, emotions
The “On Switch” for Cancer is Draining a Muscle Battery to Zero

Muscle Battery

Drain to zero causes reversal of polarity

Stem Cell

Placenta (Cancer)
<table>
<thead>
<tr>
<th>Initials</th>
<th>Age</th>
<th>Sex</th>
<th>Cancer (R/L)</th>
<th>Meridian of Cancer</th>
<th>Dental (RC, Crown, Filling)</th>
<th>Same meridian as cancer? Yes/No</th>
<th>Adjacent meridian</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA</td>
<td>59</td>
<td>F</td>
<td>Breast</td>
<td>SP/ST</td>
<td>#19 implant (LU/LI)</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>JA</td>
<td>71</td>
<td>F</td>
<td>Ovarian</td>
<td>SP/ST</td>
<td>#14 crown (SP/ST)</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>AB</td>
<td>76</td>
<td>M</td>
<td>Skin (left ear)</td>
<td>RC Unknown #4, 5 PC (LU/LI)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DB</td>
<td>78</td>
<td>F</td>
<td>Skin (multiple)</td>
<td>SP/ST LU/LI</td>
<td>#3, 20 PC (SP/ST) #19 PC (LU/LI) #30 GC (LU/LI)</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>GB</td>
<td>66</td>
<td>F</td>
<td>Acute Myeloid Leukemia (AML)</td>
<td>SP/ST</td>
<td>#14, 15, 19 RC (SP/ST) #4, 19 PC (LU/LI) #20 PC (SP/ST)</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>LB</td>
<td>53</td>
<td>F</td>
<td>Colon</td>
<td>LU/LI</td>
<td>#14 RC (SP/ST) #30 PC (LU/LI)</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>DB</td>
<td>56</td>
<td>M</td>
<td>Testicular</td>
<td>SP/ST</td>
<td>#9 RC (KI/BL) (previous)</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>RC</td>
<td>71</td>
<td>F</td>
<td>Skin</td>
<td>KI/BL</td>
<td>Full dentures</td>
<td>Need Cone Beam Scan</td>
<td></td>
</tr>
<tr>
<td>CC</td>
<td>66</td>
<td>F</td>
<td>Breast (left)</td>
<td>SP/ST</td>
<td>(Phone consult) Gold Crown in SP/ST</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>MC</td>
<td>87</td>
<td>F</td>
<td>Breast, Uterine</td>
<td>SP/ST</td>
<td>#30 GC (LU/LI) #7 Amalgam (KI/BL)</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>NC</td>
<td>55</td>
<td>F</td>
<td>Chronic Lymphocytic Leukemia (CLL)</td>
<td>SP/ST</td>
<td>#2 Amalgam (SP/ST)</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>JC</td>
<td>73</td>
<td>M</td>
<td>Prostate</td>
<td>SP/ST</td>
<td>#5 PC (LU/LI) #31 GC (LU/LI) #16 GC (PC/ TB, HT/SI)</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>SC</td>
<td>59</td>
<td>F</td>
<td>Skin (multiple)</td>
<td>SP/ST KI/BL</td>
<td>(Phone consult) Impacted wisdom teeth</td>
<td>Need Cone Beam Scan</td>
<td></td>
</tr>
<tr>
<td>Initials</td>
<td>Age</td>
<td>Sex</td>
<td>Cancer (R/L)</td>
<td>Meridian of Cancer</td>
<td>Dental (RC, Crown, Filling)</td>
<td>Same meridian as cancer?</td>
<td>Adjacent meridian</td>
</tr>
<tr>
<td>----------</td>
<td>-----</td>
<td>-----</td>
<td>---------------------</td>
<td>--------------------</td>
<td>-----------------------------</td>
<td>------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>CL</td>
<td>59</td>
<td>F</td>
<td>Breast</td>
<td>SP/ST</td>
<td>#14 Broken tooth (SP/ST)</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>TM</td>
<td>73</td>
<td>M</td>
<td>Bladder, Thyroid</td>
<td>Ki/BL, SP/ST</td>
<td>#8, 9 extracted (Ki/BL)</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>DM</td>
<td>60</td>
<td>F</td>
<td>Breast</td>
<td>SP/ST</td>
<td>#14 Missing crown (SP/ST)</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>JM</td>
<td>71</td>
<td>F</td>
<td>Breast (right)</td>
<td>SP/ST</td>
<td>#2 GC (SP/ST)</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>RM</td>
<td>61</td>
<td>M</td>
<td>Melanoma (lung)</td>
<td>LU/LI</td>
<td>#31 RC (LU/LI)</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>JP</td>
<td>69</td>
<td>M</td>
<td>Prostate</td>
<td>SP/ST</td>
<td>#14, 15 Amalgams (SP/ST)</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>DP</td>
<td>75</td>
<td>M</td>
<td>Prostate</td>
<td>SP/ST</td>
<td>None identified; upper dentures</td>
<td>Need Cone Beam Scan</td>
<td></td>
</tr>
<tr>
<td>JP</td>
<td>79</td>
<td>F</td>
<td>Breast</td>
<td>SP/ST</td>
<td>Infection in LU/LI</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>RS</td>
<td>78</td>
<td>F</td>
<td>Skin</td>
<td>SP/ST</td>
<td>#29 RC (SP/ST)</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>SS</td>
<td>69</td>
<td>M</td>
<td>Prostate</td>
<td>SP/ST</td>
<td>#14 RC (SP/ST)</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>BV</td>
<td>70</td>
<td>M</td>
<td>Skin (multiple)</td>
<td>LU/LI</td>
<td>#18, 18, 26 RC (LU/LI)</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>RW</td>
<td>72</td>
<td>M</td>
<td>Prostate</td>
<td>SP/ST</td>
<td>#29 PC (SP/ST)</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>ZW</td>
<td>82</td>
<td>M</td>
<td>Breast, Skin (tip of nose - SP/ST)</td>
<td>SP/ST</td>
<td>RC Unknown #</td>
<td>Need Cone Beam Scan</td>
<td></td>
</tr>
<tr>
<td>MW</td>
<td>78</td>
<td>M</td>
<td>Prostate</td>
<td>SP/ST</td>
<td>None identified</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>KZ</td>
<td>52</td>
<td>F</td>
<td>Basal Cell (R)</td>
<td>None identified</td>
<td>None identified</td>
<td>N</td>
<td></td>
</tr>
</tbody>
</table>
48/50 cases had a dental infection in the same meridian as the primary cancer or in the adjacent meridian.

Infections in bone can spread to adjacent meridian.
What Caused This Cancer?

Root Canal
The “On Switch” for cancer is enough electron stealers in an acupuncture muscle battery circuit to drain one of its batteries to zero, causing it to reverse its polarity. This tells the local stem cells that voltage, oxygen, and nutrients are inadequate. A placenta is necessary to attempt to keep organs on this circuit functional.

The “Off Switch” for cancer is removing the electron stealers (particularly root canal teeth in that circuit) that dropped the voltage in the first place and inserting enough electrons to flip the polarity back to normal.
NOTE

One must also remember that the body made a cancer/placenta in an attempt to overcome the lack of voltage and oxygen in a circuit. If you simply kill the cancer/placenta without correcting the reasons that the voltage/oxygen are low, you should expect that the body will simply make another cancer/placenta since the real cause hasn’t been addressed!

Thus fundamental is figuring out why the muscle battery pack that provides voltage to that organ can’t hold a charge and correcting that. Then when the cancer/placenta is destroyed by whatever means, the stimulus to making a new one is gone.