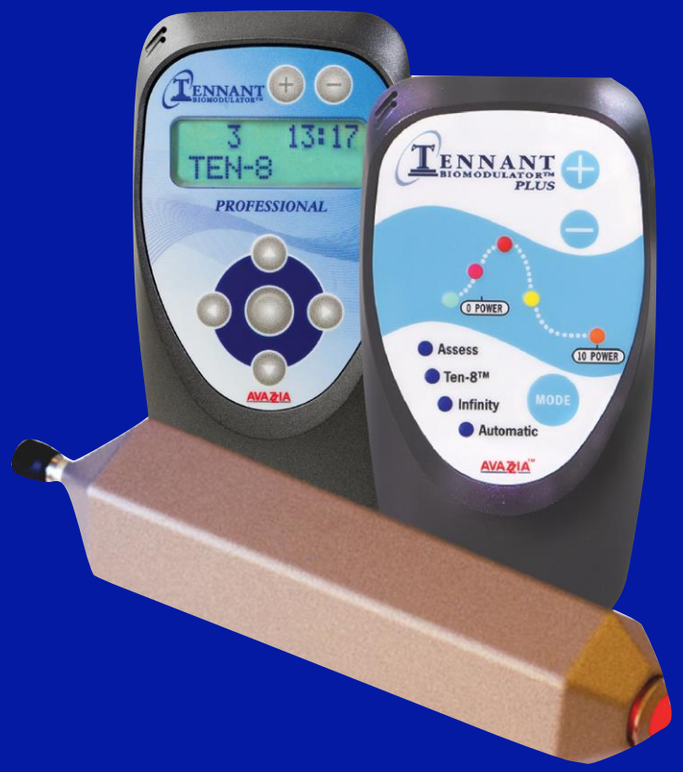
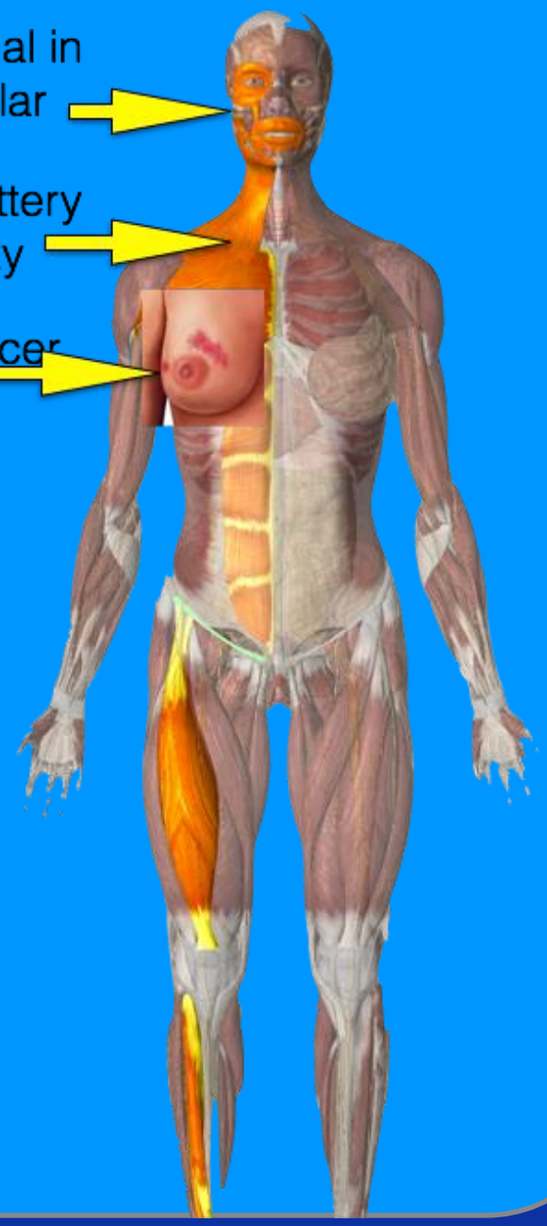
Healing is Voltage®

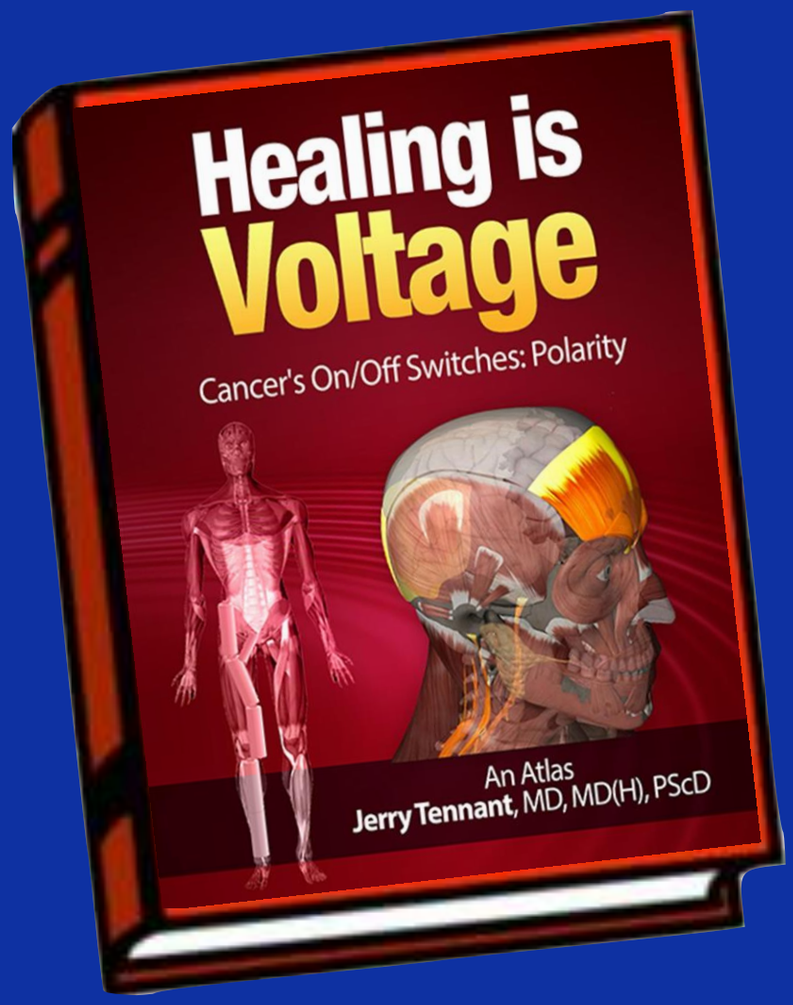
Jerry Tennant, MD, MD(H), PScD

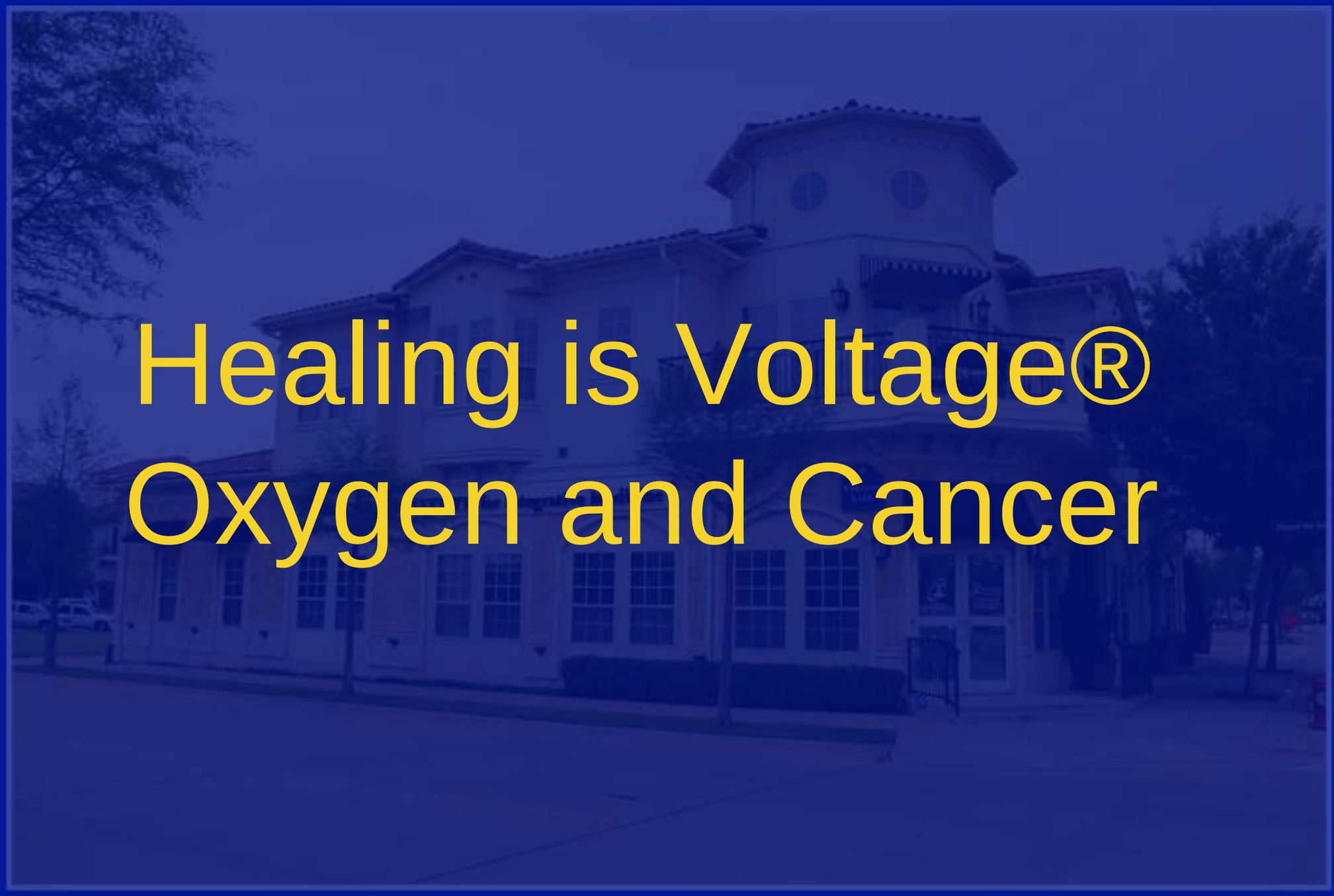


Healing is Voltage (Energy)

1. Root canal in Upper molar
2. Muscle battery flips polarity
3. Breast Cancer (Placenta)

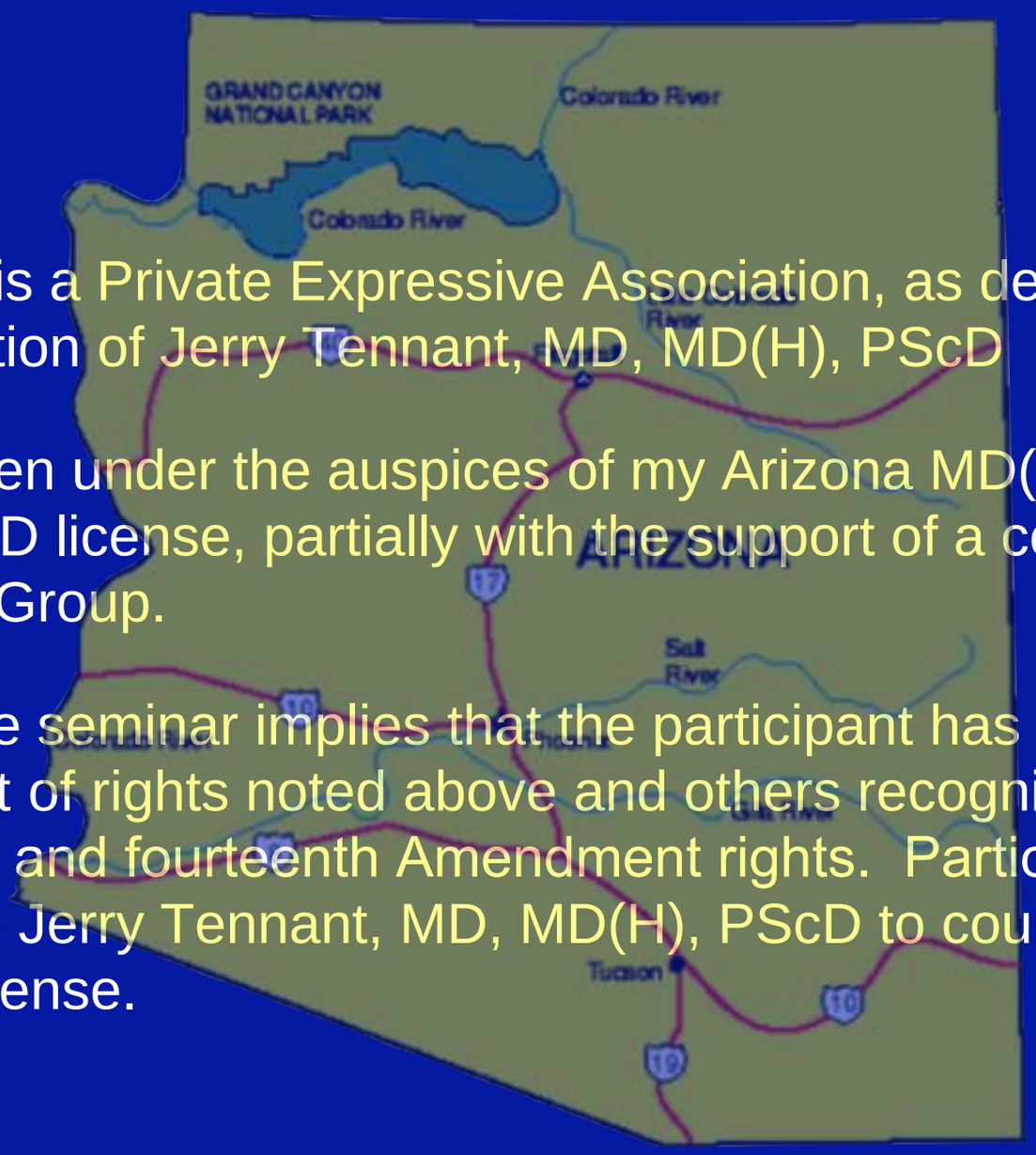






Healing is Voltage®
Oxygen and Cancer

Notice



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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

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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.

Chapters

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

Chapters

JOHNS HOPKINS UNIVERSITY

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

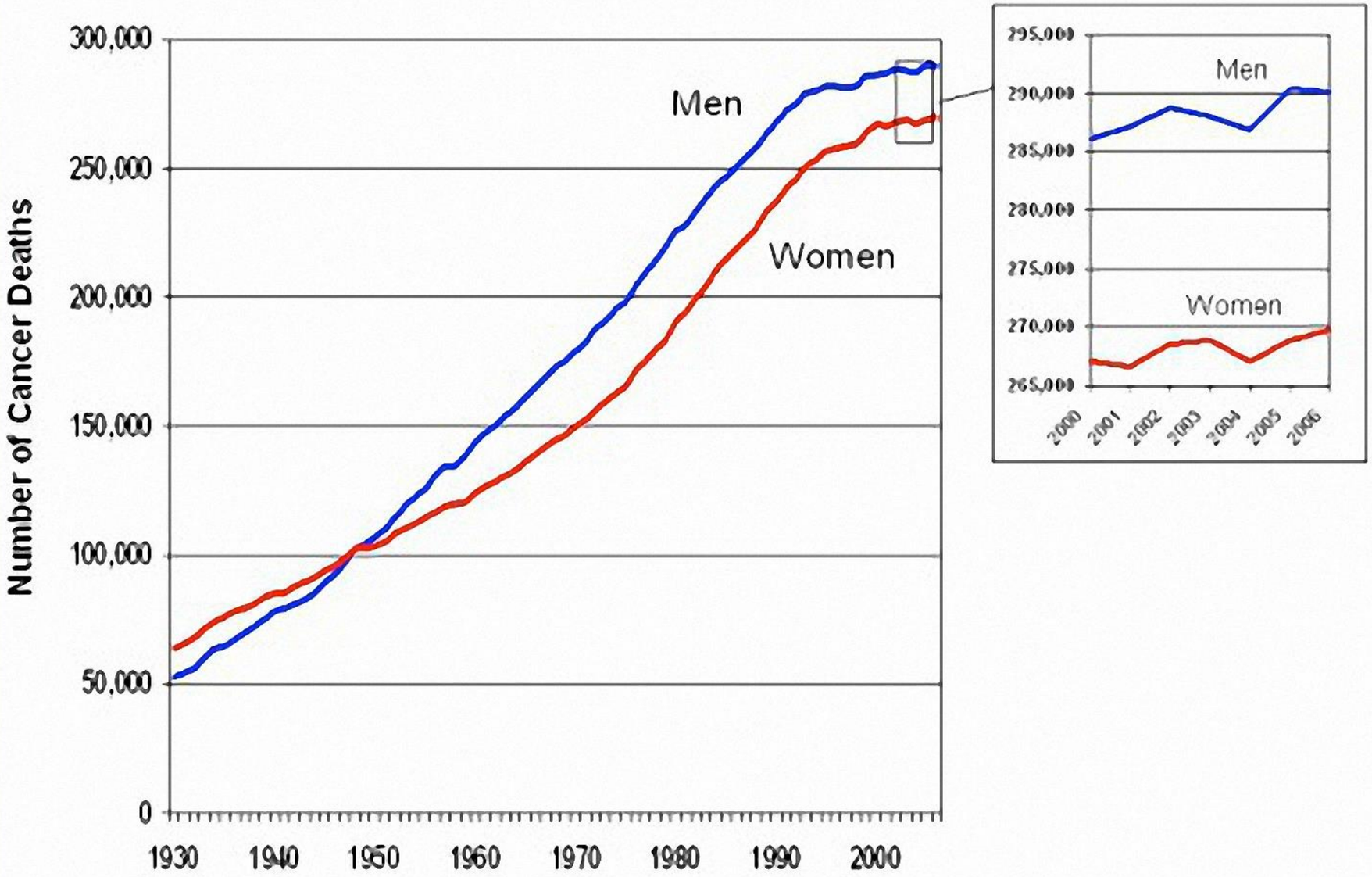
- Assume 6/100 people have athlete's foot. That is 6%.
- Now assume we give them green jelly beans and only 3/100 have athlete's foot.
- That is a 3% Absolute Risk Reduction because 6%-3% is 3%.

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



Source: US Mortality Data, 1930-2006, National Center for Health Statistics, Centers for Disease Control and Prevention, 2009.

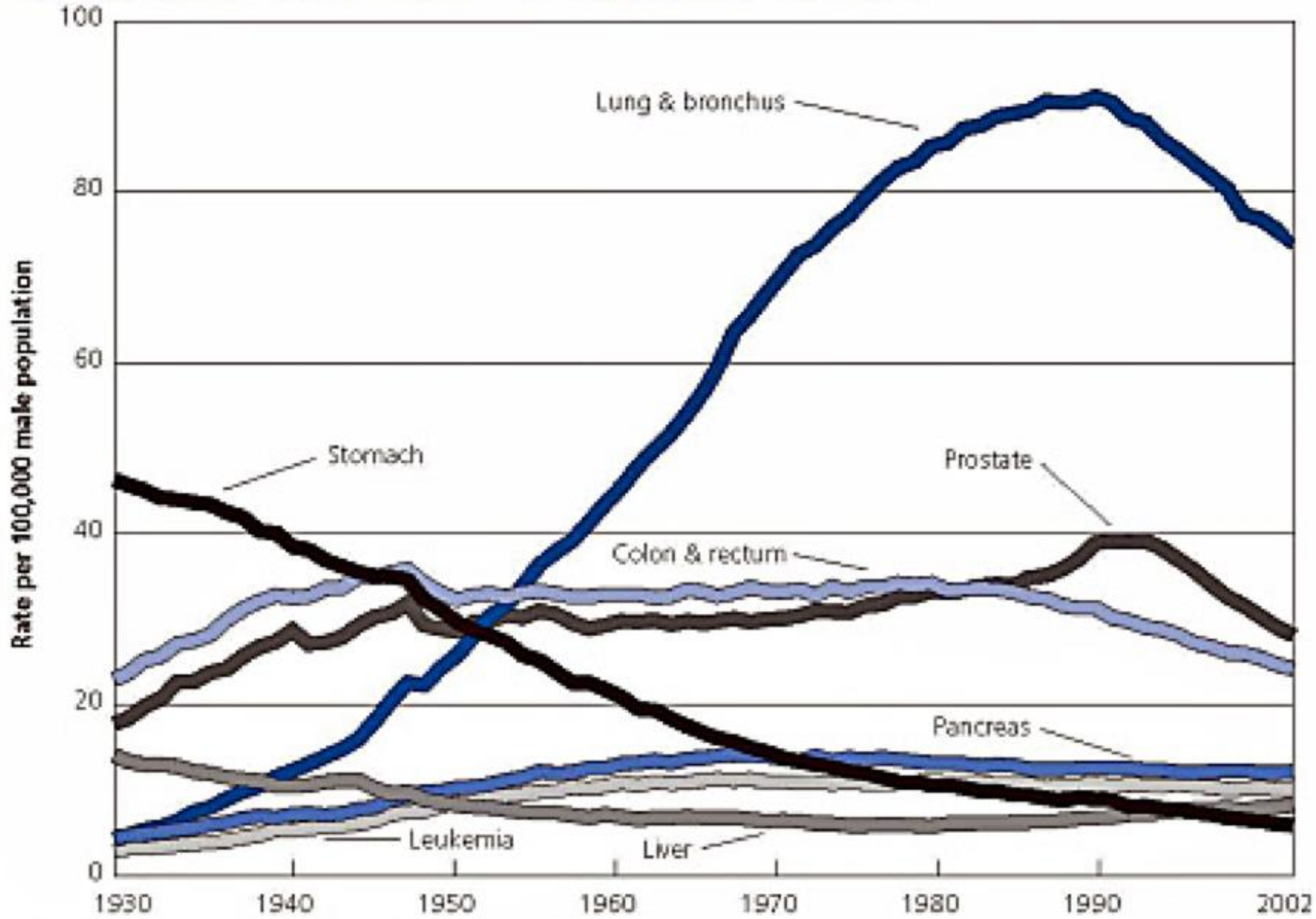
We are NOT reducing death from cancer

- 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

	Estimated New Cases			Estimated Deaths		
	Both Sexes	Male	Female	Both Sexes	Male	Female
All Sites	1,665,540	855,220	810,320	585,720	310,010	275,710

Age-Adjusted Cancer Death Rates,* Males by Site, US, 1930-2002



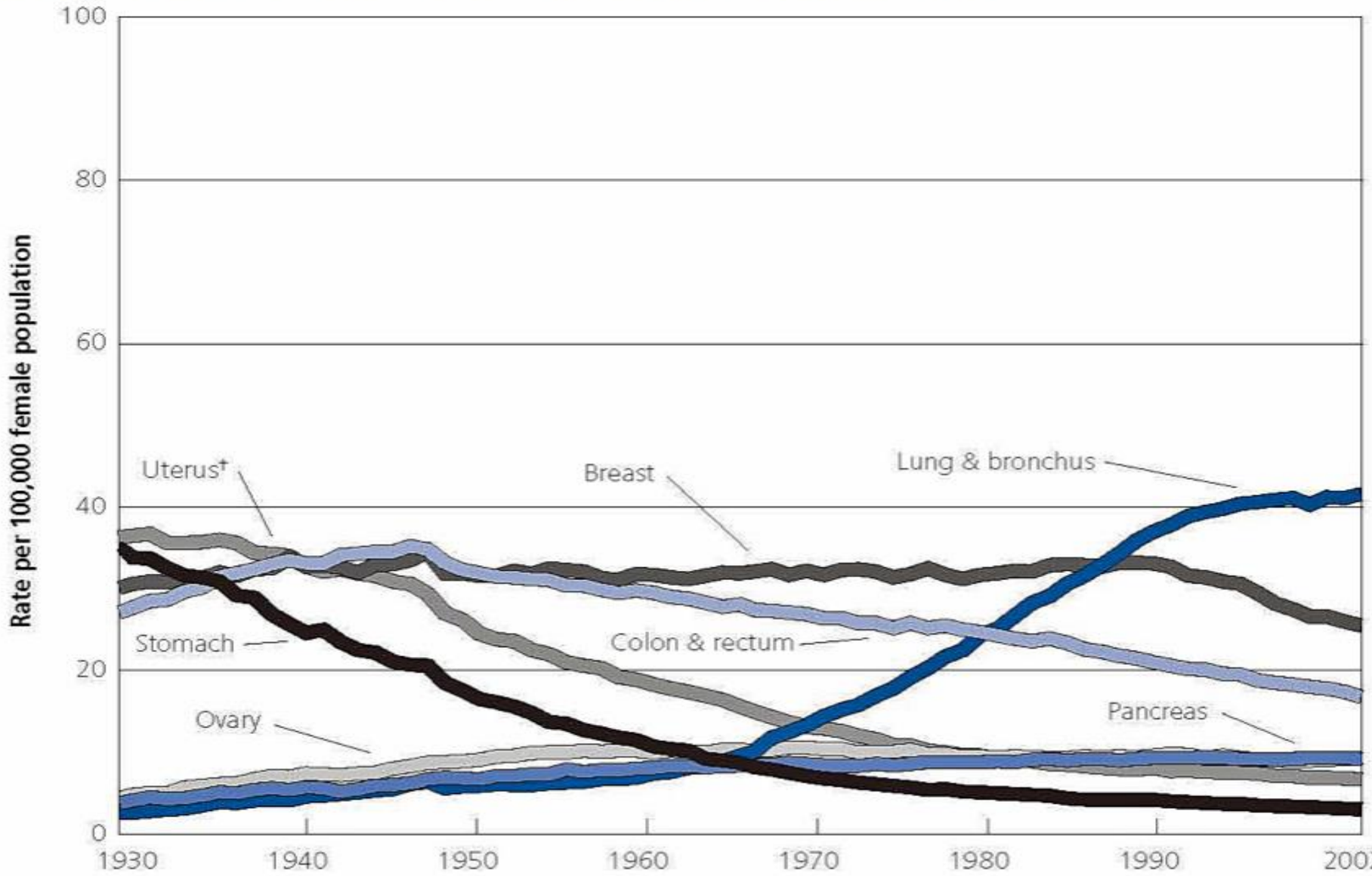
*Per 100,000, age-adjusted to the 2000 US standard population.

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.

Source: US Mortality Public Use Data Tapes 1960 to 2002, US Mortality Volumes 1930 to 1959, National Center for Health Statistics, Centers for Disease Control and Prevention, 2005.

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.

Source: US Mortality Public Use Data Tapes 1960 to 2002, US Mortality Volumes 1930 to 1959, National Center for Health Statistics, Centers for Disease Control and Prevention, 2005.

American Cancer Society, Surveillance Research, 2006

Results from Chemotherapy

Chemotherapy

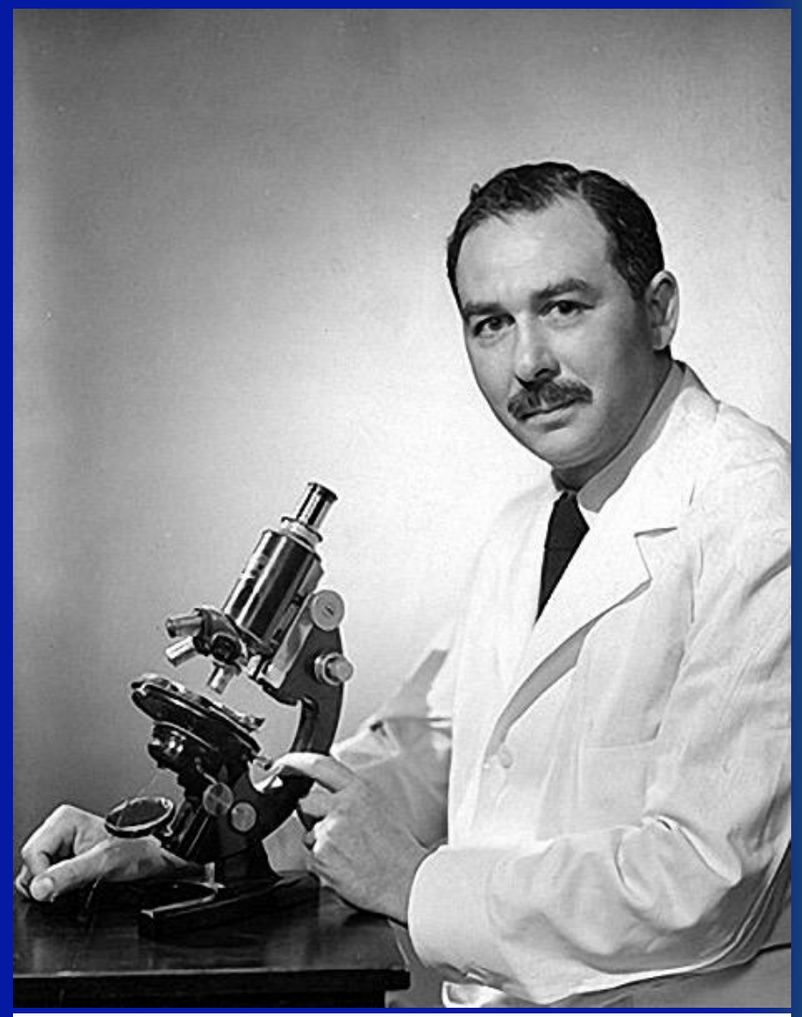
Mustard gas was used in WWI. It destroyed bone marrow. In 1942, Lewis Goodman and Alfred Gilman rediscovered mustard gas and considered using it for blood cancers. With knowledge that the compound depleted white blood cells, the pharmacologists experimented with intravenous injections on a terminally 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.

Lewis Goodman

Chemotherapy

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 aminoptyrine 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.



Sidney Farber

Effectiveness of Chemotherapy Drugs

Generic Name	Brand Name	Company	Indications	Approval Date	Median Time to Death (months)	Advertised Survival	Reference
anastrozole	Arimidex	Zeneca	Breast IV	1996	26.7	56.10%	Cancer 1998:83:1142-1152
capecitabine	Xeloda	H-LaRoche	Breast IV	1998	12.8		J Clin Oncol 1999; 17:485
docetaxel	Taxotere	Aventis	Breat IV, Lung IV	1996	15.0		J Clin Oncol 1996; 14:58-65
doxorubicin	Adriamycin	Pharmacia	Breast II	2003	14.0		Clin Oncol 1999; 17:2341-54
fluorouracil 5FU	Adrucil	ICN Puerto Rico	Colon IV	1962	8.5		Lancet 1998; 352:1407-1412
fluorouracil 5FU	Adrucil	ICN Puerto Rico	Pancreatic	1962	4.2-5.5		J Clin Oncol 1997; 15:2403-2413
gemcitabine	Gemzar	Lilly	Breast IV	1996+	15.2		Anticancer Drugs 1999; 10:155-62
gemcitabine	Gemzar	Lilly	Pancreatic	1996+	5.6		Invest New Drugs 1994; 12: 1229
irintecan	Campotstar	Pharmacia	Colon IV	1996	10.8		Lancet 1998; 352:1407-1412
letrozole	Femara	Novartis	Breast IV	1997	25.3		Pharmacoeconomics 1999; 16:379-97
megestrol acetate	Megace; Depo-provera	Bristol Meyers Squibb; Pfizer	Breast IV	1971	22.5		Cancer 1998:83:1142-1152
mitoxantrone	Novatrone	Immunex	Prostate (pain)	1996	No improvement		J Clin Oncol 1996; 14:1756-64
oxaliplatin	Eloxatin	Sanofi Synthelabo	Colon IV	2002	19.4		J Clin Oncol 2000; 18:136-47
oxaliplatin	Eloxatin	Sanofi Synthelabo	Ovarian	2002	10.0		J Clin Oncol 2000; 18:1193-202
porfimer sodium	Photofrin	QLT	Lung IV; Esophageal	1998	2.1		Gastroenterology 1995; 109:63-72
rituximab	Rituxan	Genentech	Lymphoma	1997	11.6		Blood 1998; 92:414a-415a
temozolomide	Temodar	Schering	Brain (Astrocytoma)	1999	4.6		Eur J Cancer 1996; 32A:2236-41
temozolomide	Temodar	Schering	Melanoma	1999	7.7		J Clin Oncol 2000; 18:158-66
topotecan	Hycamptin	Smith-Kline	Ovarian	1996			J Clin Oncol 2000; 18:1193-202
topotecan	Hycamptin	Smith-Kline	Small Cell Lung	1998	10.0		Lung Cancer 2000; 28:157-62
trastuzumab	Herceptin	Genentech	Breast IV	1998+	5.1		Semin Oncol 1999; 26S:78-83
					7.6		
+ Approved for use in combination with other drugs					Average of Medium Time to Death in Months		

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.”

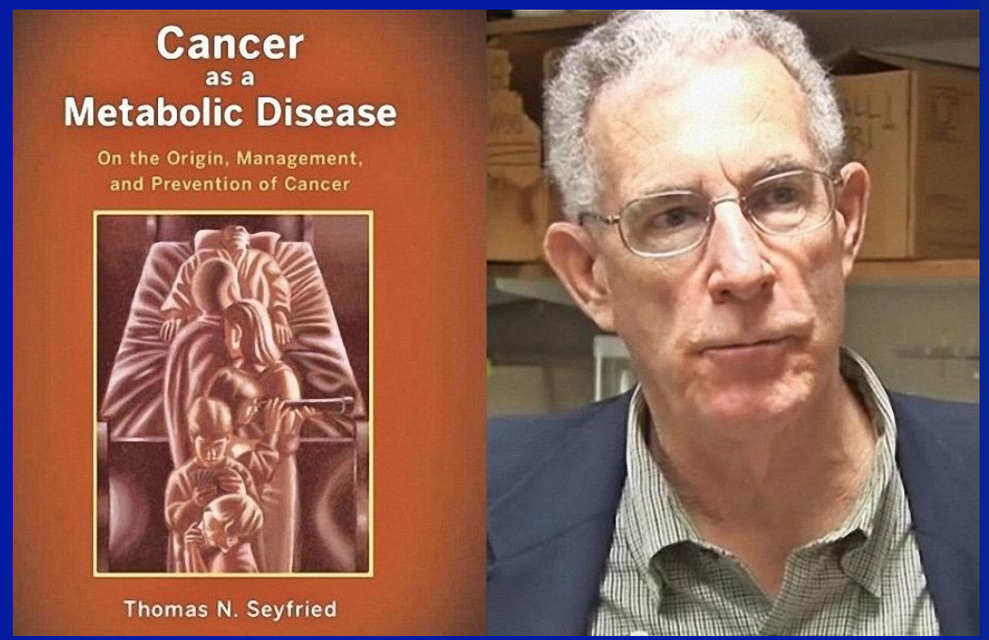
It is obvious that a therapy that only has a 2-3% success rate is the wrong paradigm!

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.



Carcinogenesis. 2014 Mar;35(3):515-27. doi: 10.1093/carcin/bgt480. Epub 2013 Dec 16.; *Cancer as a metabolic disease: implications for novel therapeutics*.; Seyfried TN1, Flores RE, Poff AM, D'Agostino DP.

Cancer's Off Switch

Chapters

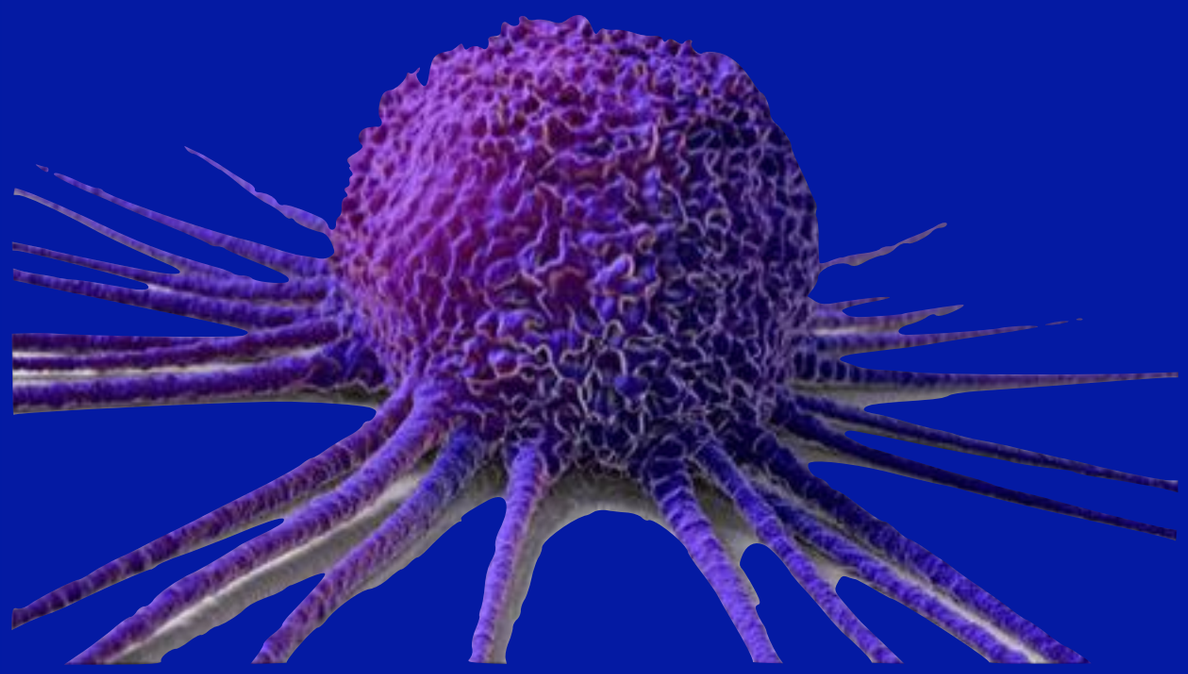
Blastema (Stem Cell) Theory

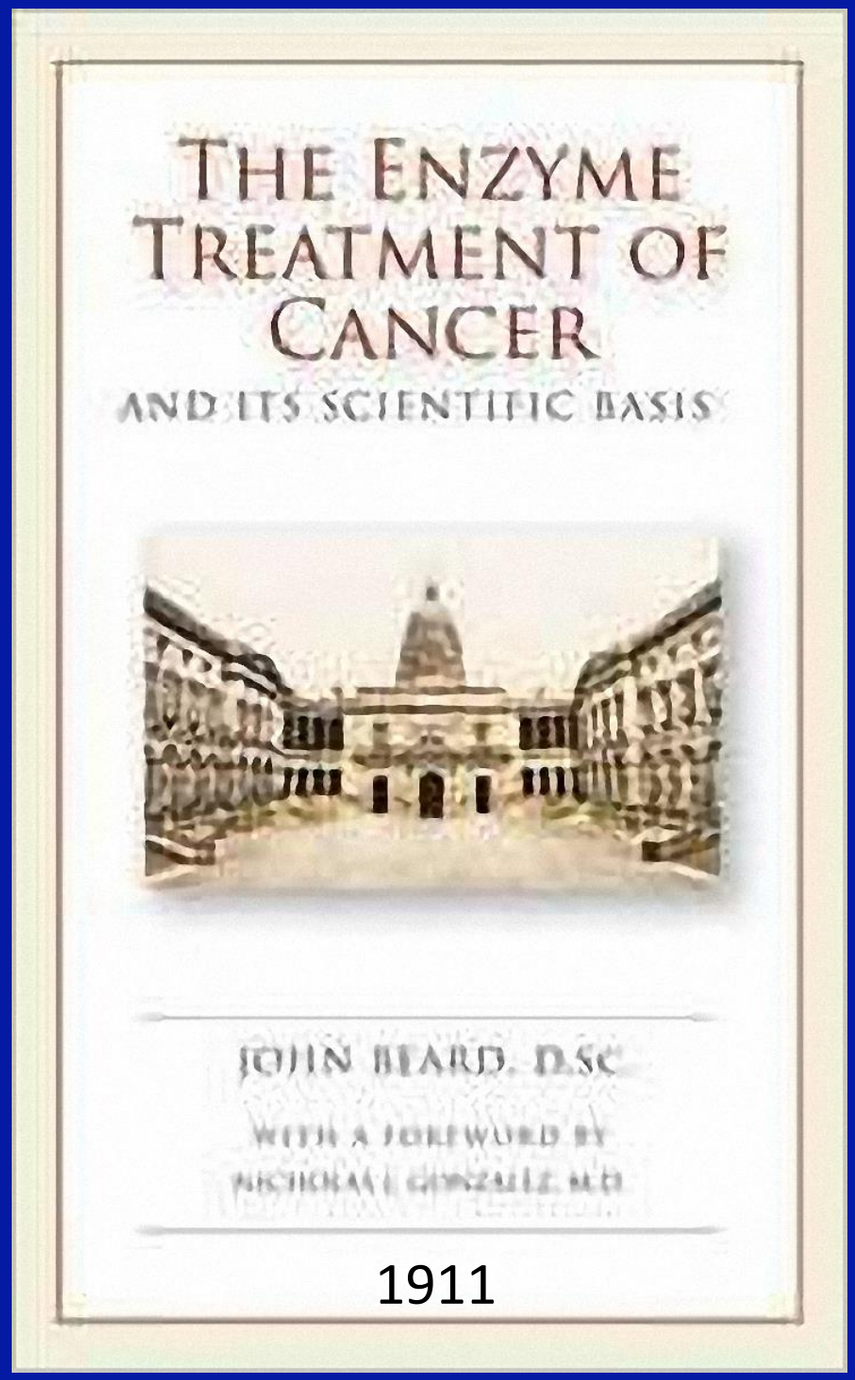
In 1838, Johannes Müller: a German pathologist, published *On the Nature and Structural Characteristics of Cancer, and of Those Morbid Growths Which May Be Confounded with It.* He noted that cancer is a collection of cells and was perhaps the first to publish that cancer arose from the blastema (stem 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

Johannes Müller

John Beard, D.Sc.





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.

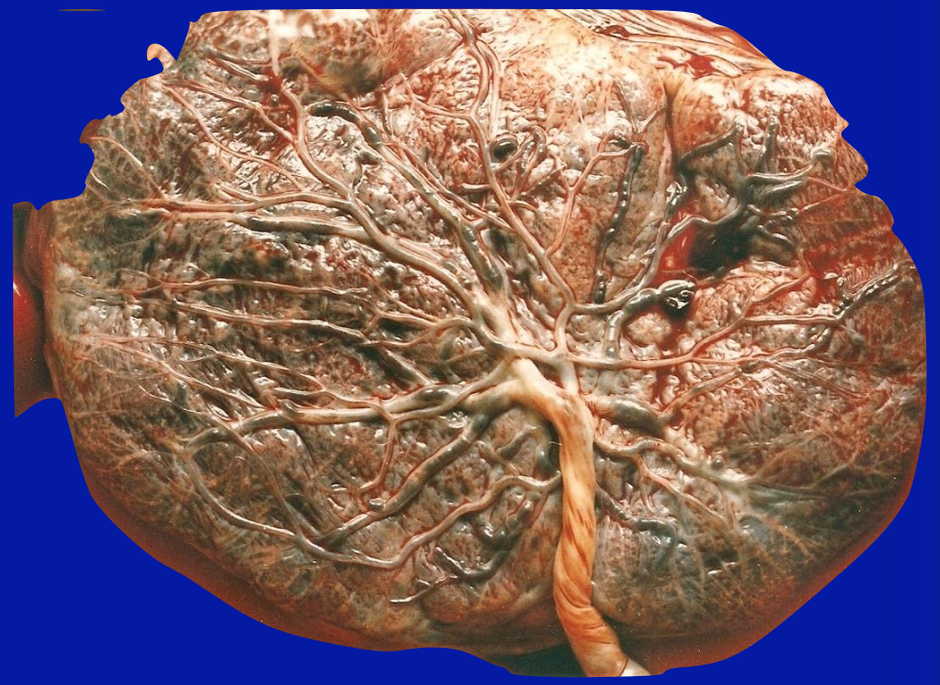
- To supply these needs, stem cells create a new system. Blood vessels invade the wall/vessels of the uterus, creating a new blood supply. It then creates a tumor (placenta) that can protect the fetus from the immune system of the body. The placenta produces nagalase to confound the mother's GcMAF to 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.

Semin Reprod Endocrinol. 1999;17(3):275-90.

Embryo implantation and tumor metastasis: common pathways of invasion and angiogenesis.; Murray MJ1, Lessey BA.

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.

The Science of Mom; Alice Callahan

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.

Nobuto Yamamoto

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 (http://gcmaf.timsmithmd.com/book/book/2/

Nalaglase 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.

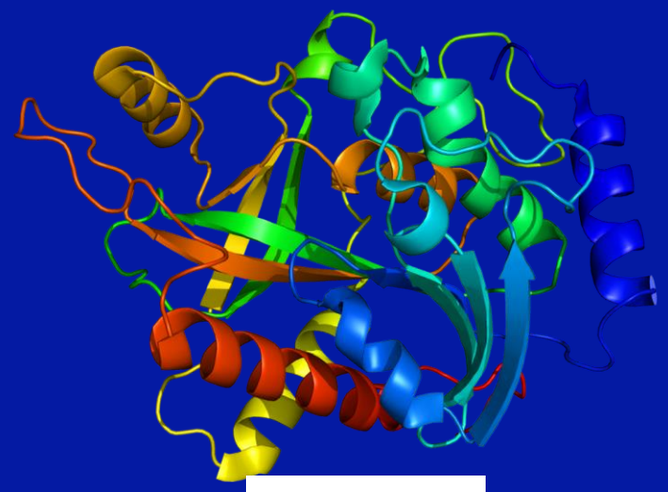
Bioch M, Isobe T, Okuyama T, Sakimura K, Takahashi Y, Nishizawa M, Uda Y, Miyatake T. em Biophys Res Commun. 1989 Sep 29;163(3):1498-504.; Molecular cloning of a full-length cDNA for human alpha-N-acetylgalactosaminidase (alpha-galactosidase B). Tsuji S1, Yamauchi T, Hiraiwa

Macrophages inactivated by nagalase blocking GcMAF

Placenta or Cancer covered with nagalase

Theoretically Trypsin Can Destroy Nagalase (protein)

GcMAF is made by removing sugars from vitamin D-binding protein (amylase?)



Protein

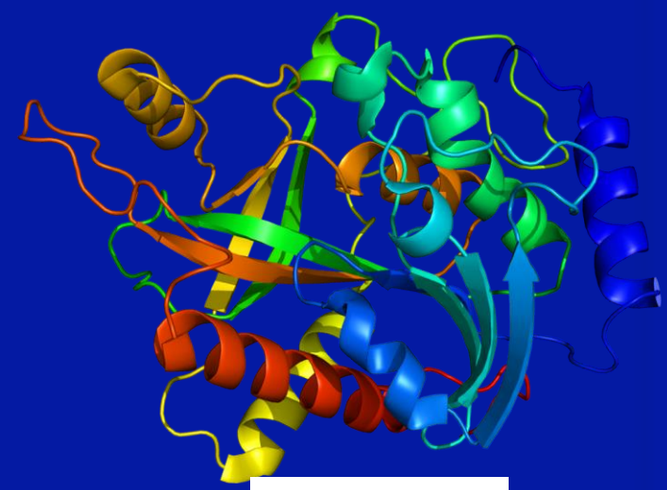
N-acetylgalactosamine (Sugar)

D-galactose (Sugar)

Sialic Acid (Sugar)

Vitamin D-Binding Protein

Remove Two Sugars

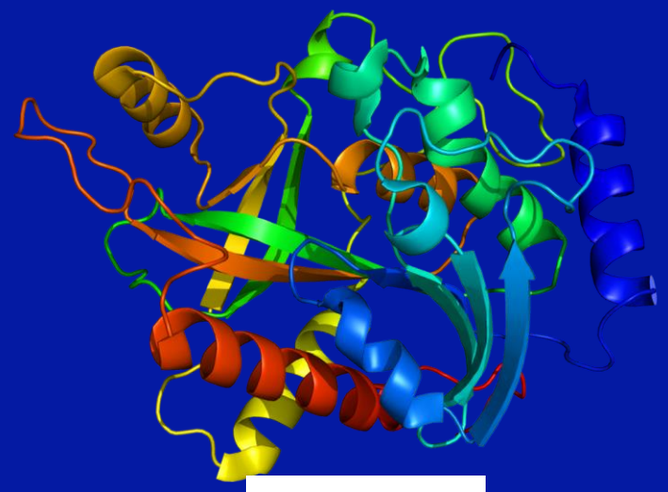


Protein

N-acetylgalactosamine (Sugar)

GcMAF

GcMAF is made by removing sugars from vitamin D-binding protein (amylase?)



Protein

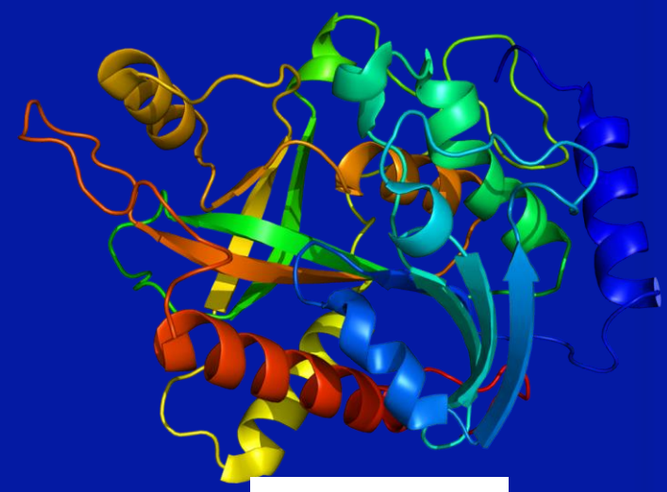
N-acetylgalactosamine (Sugar)

D-galactose (Sugar)

Sialic Acid (Sugar)

Amylase

Remove Two Sugars



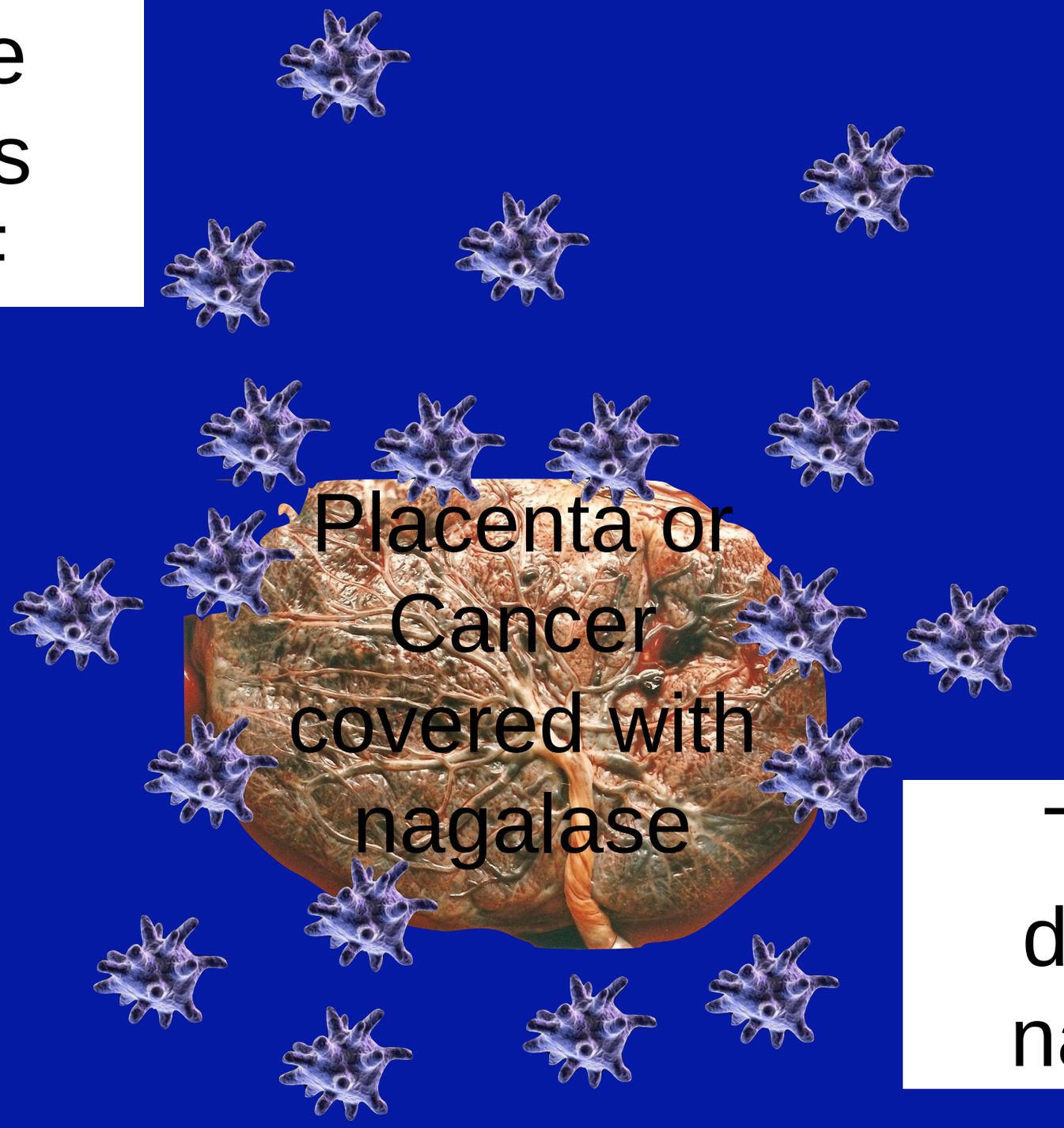
Protein

N-acetylgalactosamine (Sugar)

GcMAF

Vitamin D-Binding Protein

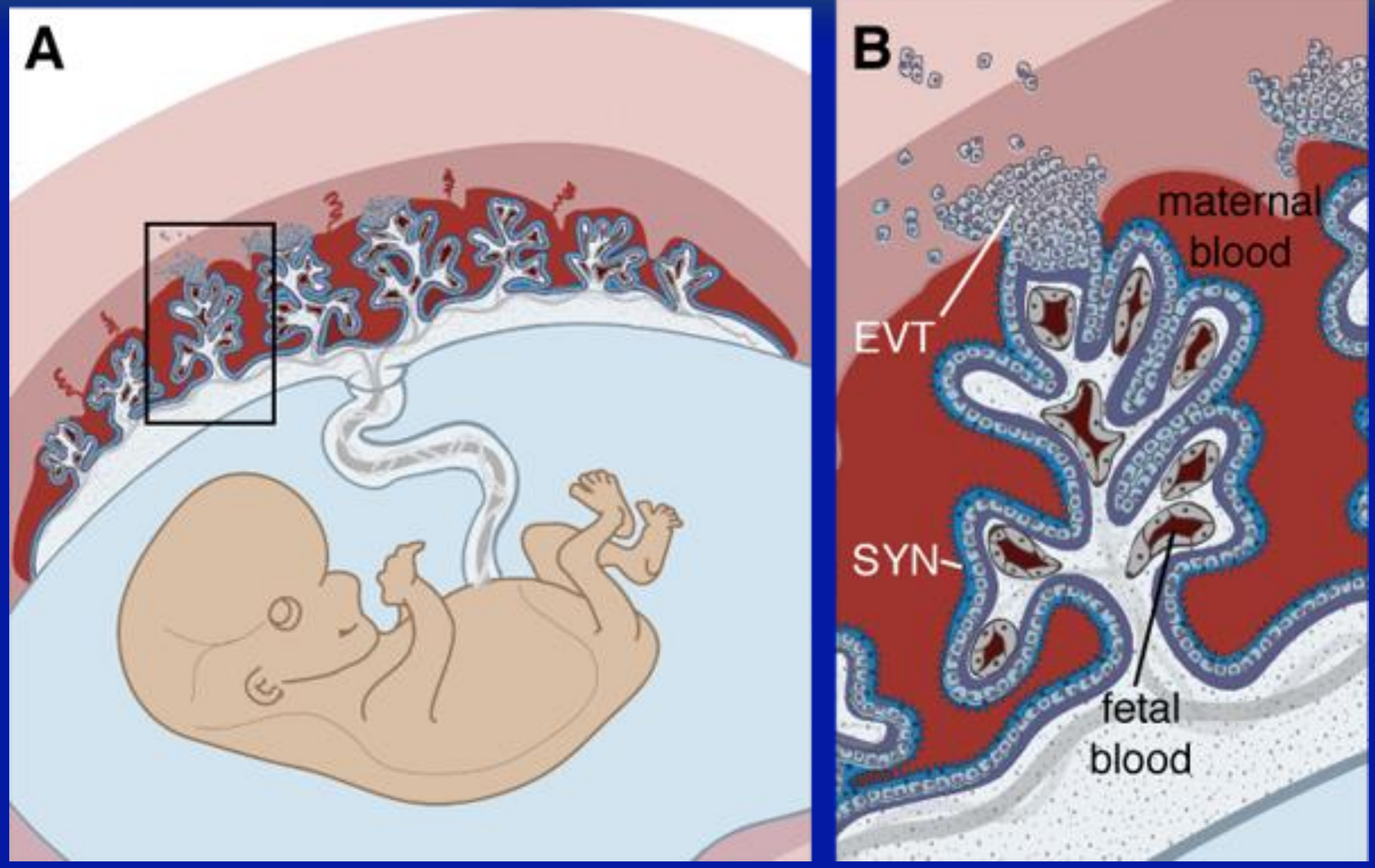
Amylase activates GcMAF



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

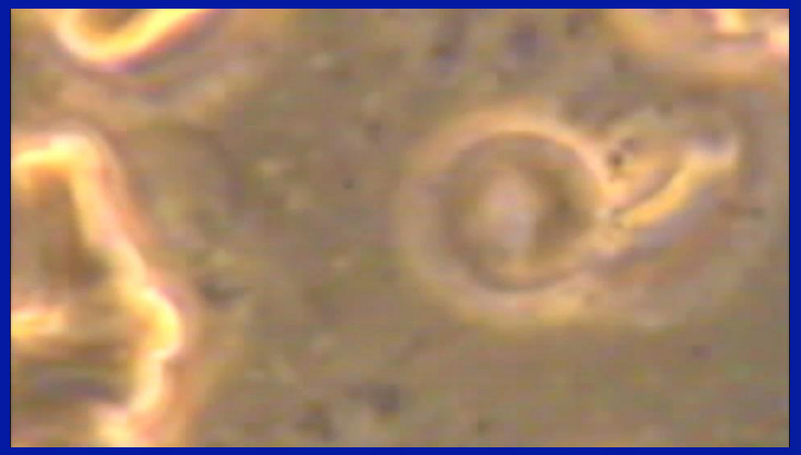
Cancer and Amylase

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.

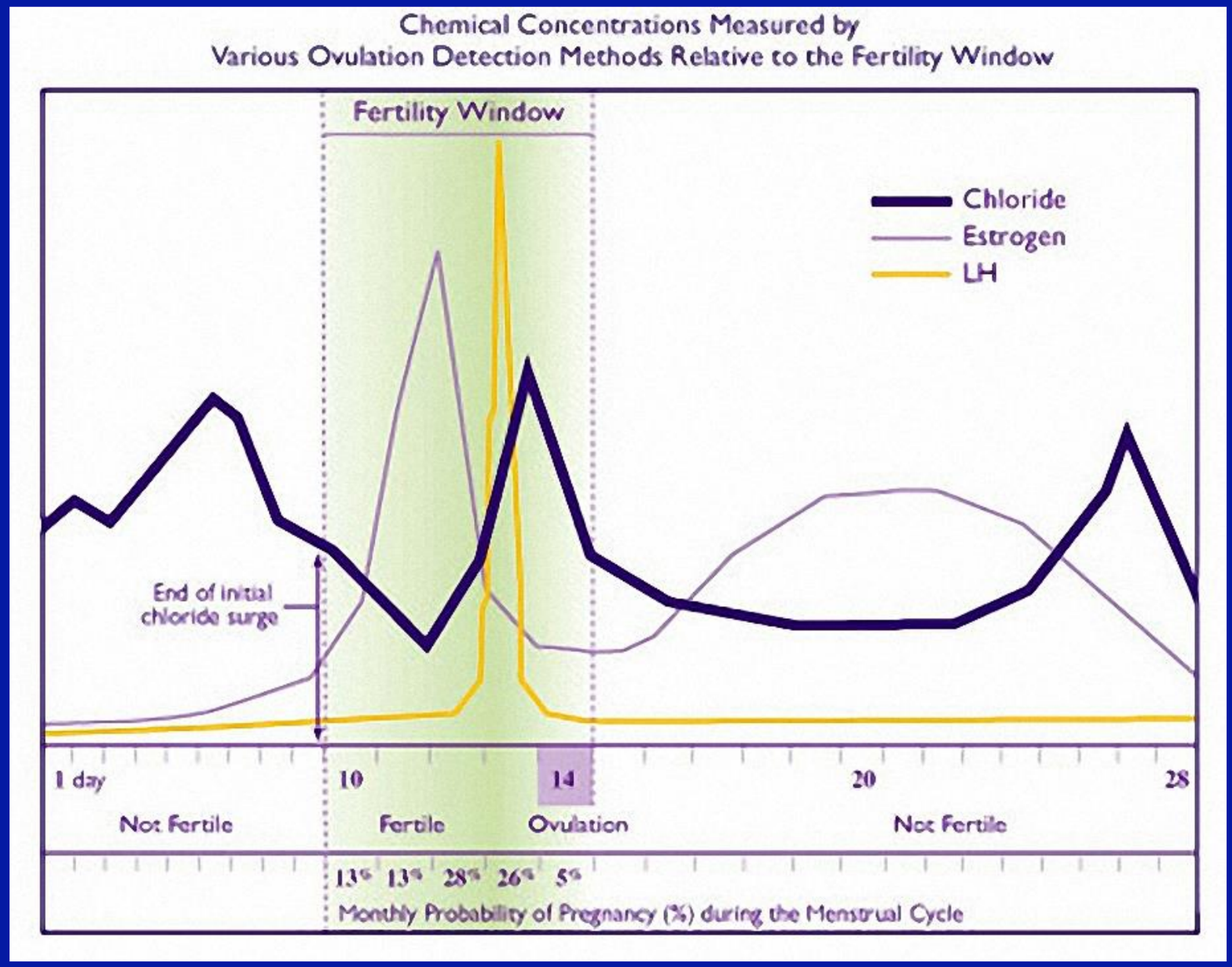
Oxygen, Fungus and Cancer

- 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.

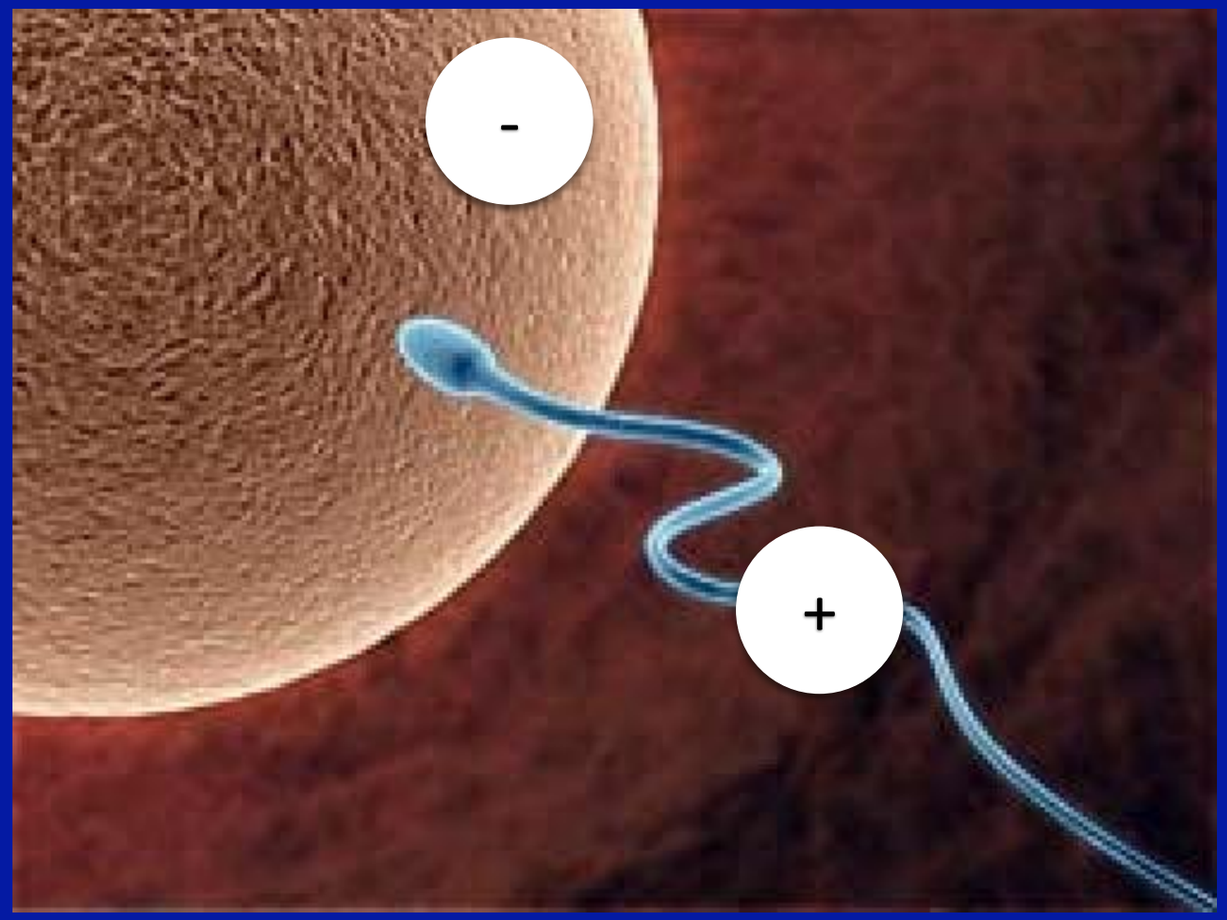
Otto Warburg



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!

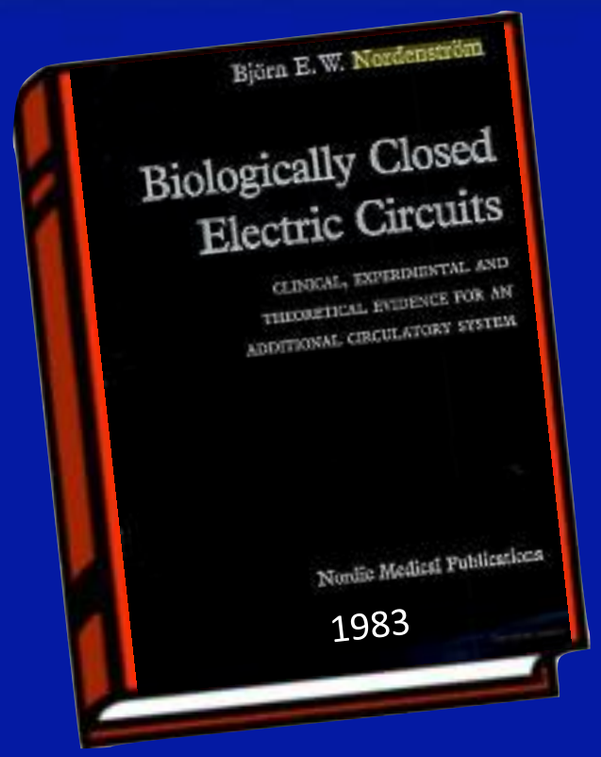


The Signal for Stem Cells to Make a Placenta is a Reversal of Polarity

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



Electro-medicine

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 medicine stand.

Bjorn Nordenstrom, MD

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.

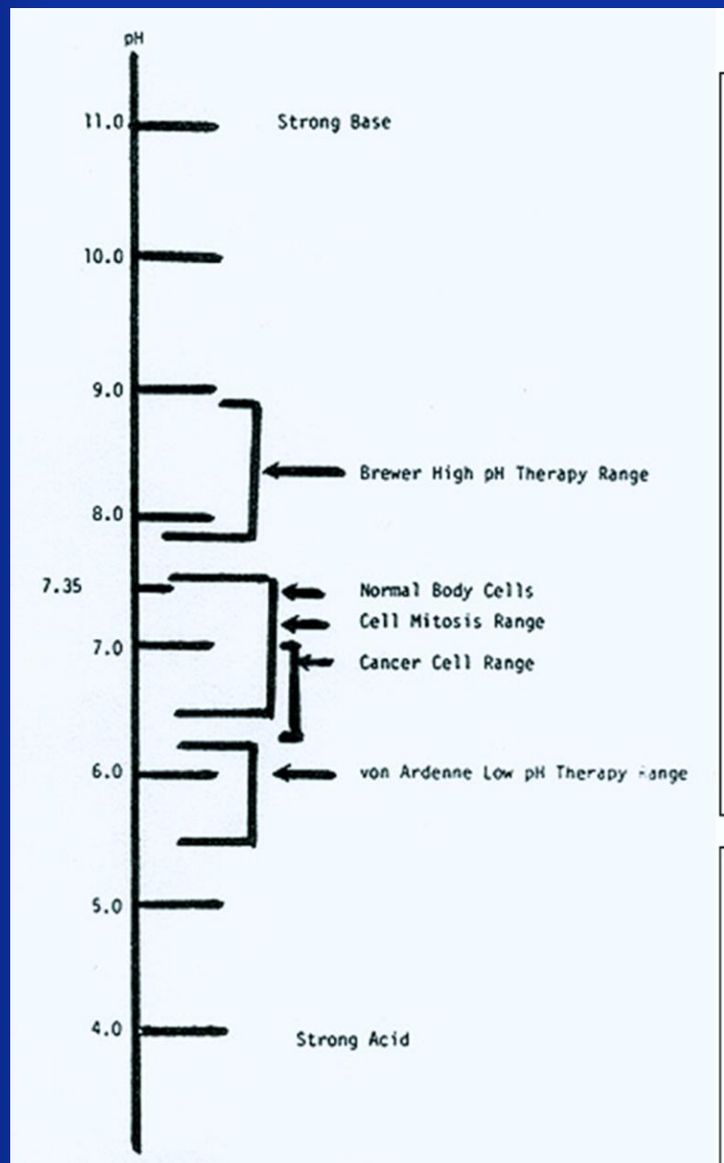


FIG. 1. The relationship between pH of cancer cells and cancer progression: the high and low pH therapies.

Values are Approximate

	Nakatani	Cell Voltage	Cell pH	Salivary pH	Cell pH	Cell Voltage	Symptoms
Electron Donor	210	-105	8.84	8.04	Viruses	-105	
	200	-100	8.75	7.95	Bacteria	-100	
	190	-95	8.66	7.86	Fungus	-95	
	180	-90	8.58	7.78	Cancer Cells	-90	Symptoms
	170	-85	8.49	7.69	Die at 7.8-8.8	-85	of
	160	-80	8.40	7.60		-80	Healing
	150	-75	8.31	7.51		-75	
	140	**-70**	**8.23**	**7.43**		**-70**	
	130	-65	8.14	7.34		-65	
	120	-60	8.05	7.25		-60	
	110	-55	7.96	7.16		-55	Dull
	100	**-50**	**7.88**	**7.08**	**Normal**	**-50**	**Headache**
	90	-45	7.79	6.99	**Healing**	-45	
	80	-40	7.70	6.90		-40	
	70	-35	7.61	6.81		-35	
	60	-30	7.53	6.73		-30	
	50	-25	7.44	6.64		-25	*Operating*
	40	**-20**	**7.35**	**6.55**		**-20**	***Voltage***
	30	-15	7.26	6.46		-15	Tired
	20	-10	7.18	6.38		-10	Sick
	10	-5	7.09	6.29		-5	Organ failure
	0	0	7.00	6.20		0	**Change Polarity**
Electron Stealer		5	6.91	6.11		5	
		10	6.83	6.03		10	
		15	6.74	5.94		15	**Pain**
		20	6.65	5.85		20	
		25	6.56	5.76		25	**Decreased Oxygen**
		30	6.48	5.68		30	
		35	6.39	5.59		35	
		40	6.30	5.50		40	**Chronic Infections**
		45	6.21	5.41		45	
		50	6.13	5.33		50	
		55	6.04	5.24		55	**Damage DNA = Cancer**

Chapters

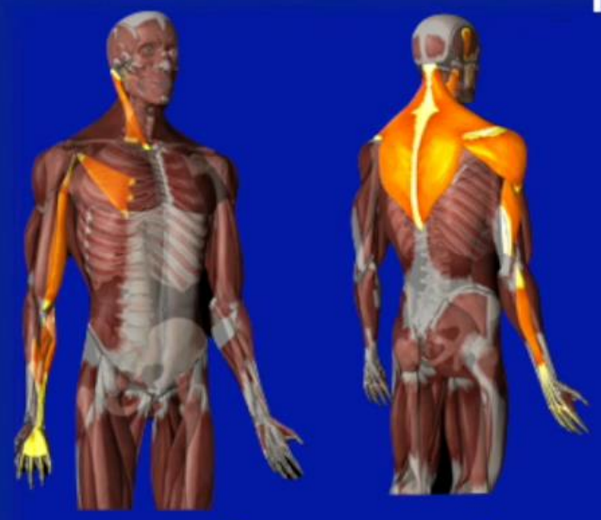
Healing is Voltage

Cancer's On/Off Switches

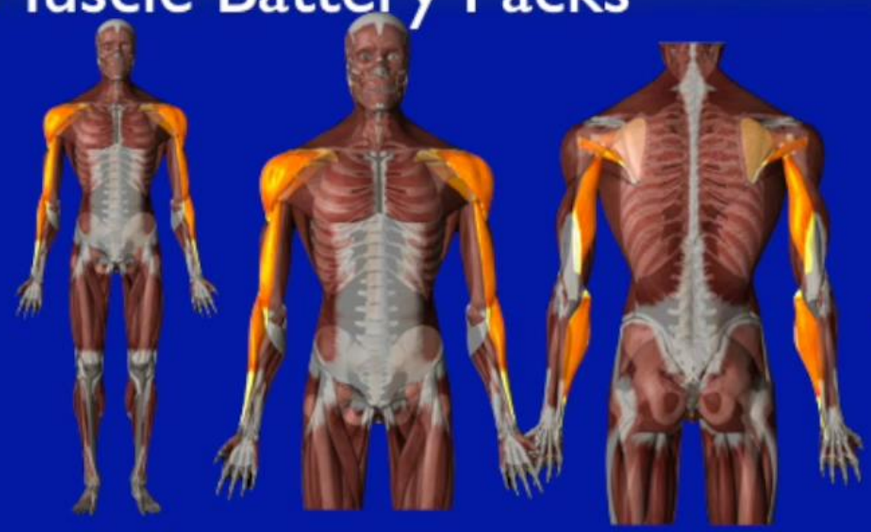
Cancer is the only response the body can do for severe hypoxia caused by draining an acupuncture muscle battery pack to zero. This flips its polarity, telling stem cells to make a placenta (cancer) in an effort to keep the organ functioning.

Chapters

Muscle Battery Packs

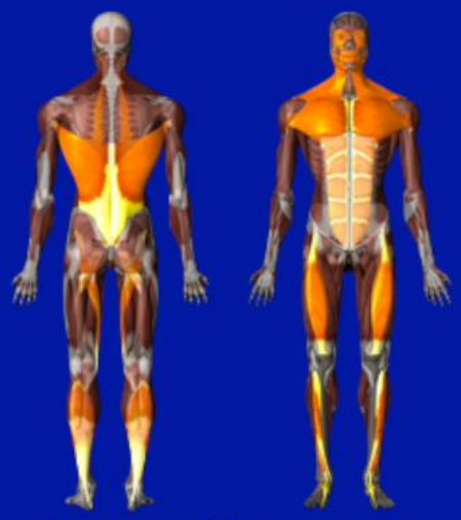


Sympathetic/Parasympathetic

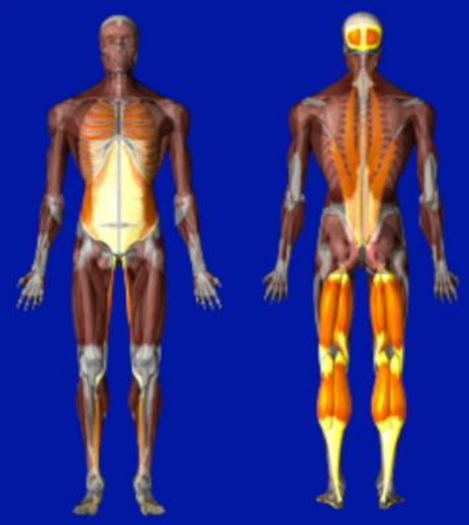


Lung/Large Intestine

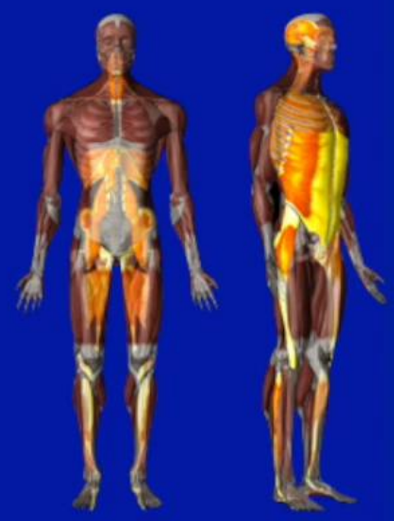
Heart/Small Intestine



Spleen/Stomach



Kidney/Bladder



Liver/Gall Bladder

These images are in the book *Healing is Voltage, Acupuncture Muscle Batteries*

The relationship between H^+ , OH^- and pH

OH^- concentration(mol/l)		pH	H^+ concentration(mol/l)	
1×10^{-14}	0.00000000000001	0	1	1×100
1×10^{-13}	0.0000000000001	1	0.1	1×10^{-1}
1×10^{-12}	0.000000000001	2	0.01	1×10^{-2}
1×10^{-11}	0.00000000001	3	0.001	1×10^{-3}
1×10^{-10}	0.0000000001	4	0.0001	1×10^{-4}
1×10^{-9}	0.000000001	5	0.00001	1×10^{-5}
1×10^{-8}	0.00000001	6	0.000001	1×10^{-6}
1×10^{-7}	0.0000001	7	0.0000001	1×10^{-8}
1×10^{-5}	0.00001	9	0.000000001	1×10^{-9}
1×10^{-4}	0.0001	10	0.0000000001	1×10^{-10}
1×10^{-3}	0.001	11	0.00000000001	1×10^{-11}
1×10^{-2}	0.01	12	0.000000000001	1×10^{-12}
1×10^{-1}	0.1	13	0.0000000000001	1×10^{-13}
1×100	1	14	0.00000000000001	1×10^{-14}

Increasing acidity

Increasing basicity

$$CO_2 + H_2O \rightleftarrows H_2CO_3 \rightleftarrows HCO_3^- + H^+$$

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).

https://www.livestrong.com/article/218049-the-effects-of-too-much-carbon-dioxide-in-the-blood/

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_2CO_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).

Carbonate Buffer System

- 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, HCO_3- , carbonic acid, H_2CO_3, and carbon dioxide, 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).

$$CO_2 + H_2O \rightleftarrows H_2CO_3 \rightleftarrows HCO_3^- + H^+$$

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 H_2CO_3 is made, which then increases the acidity (lowers the voltage) of the blood.

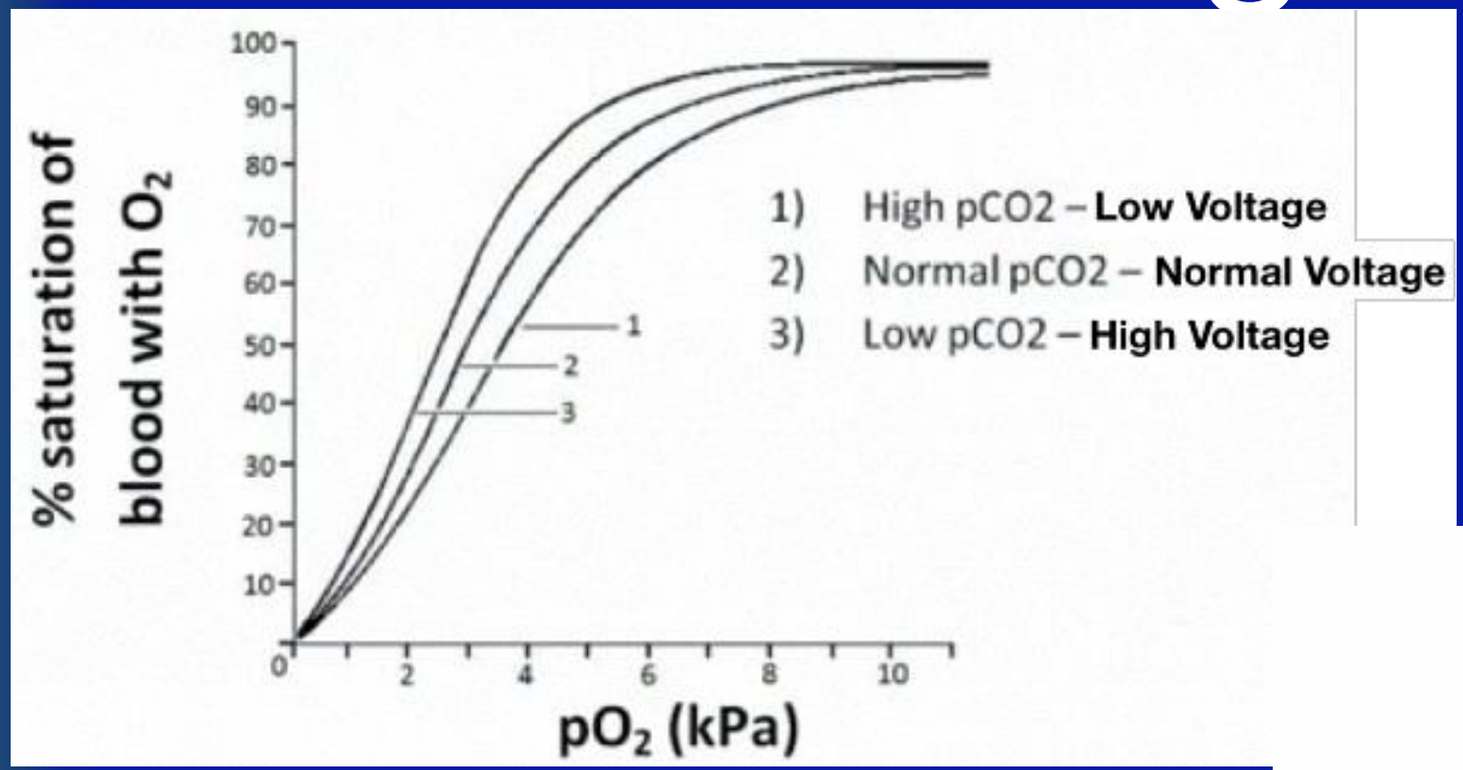
Regulation of Blood Acidity (Voltage)

- 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.

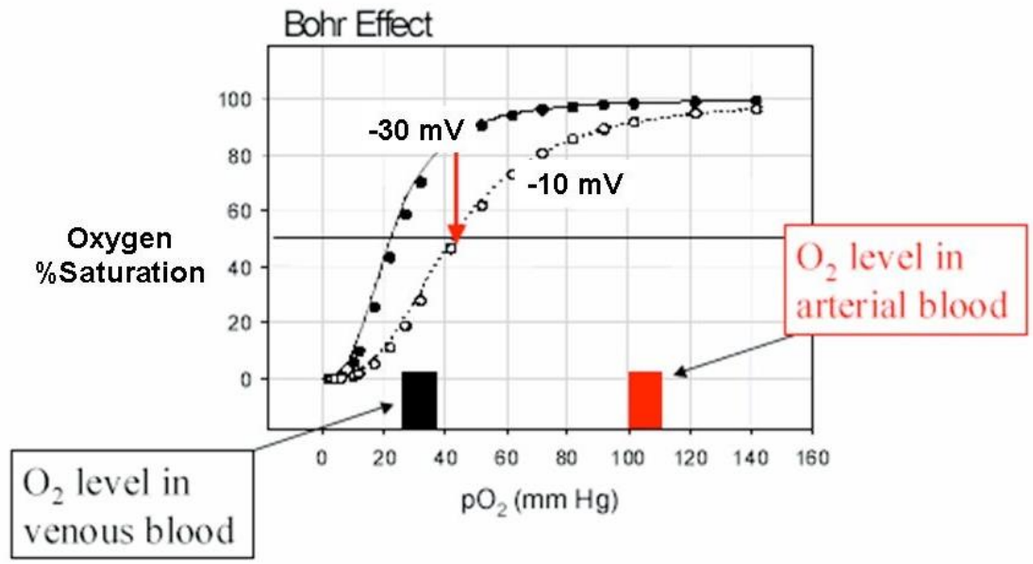
Acidosis and Alkalosis (Low Voltage and High Voltage)

- 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

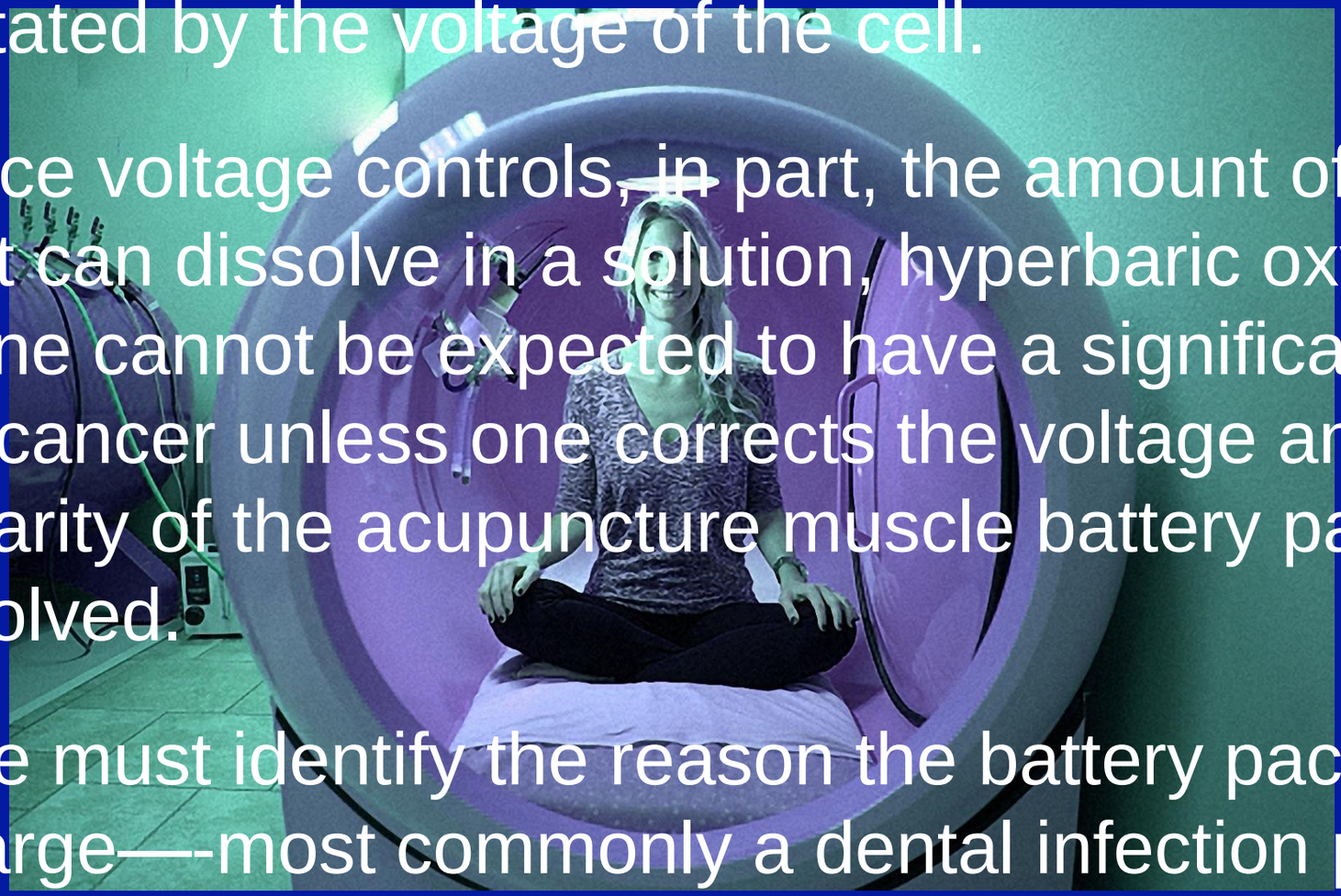


Bohr Effect



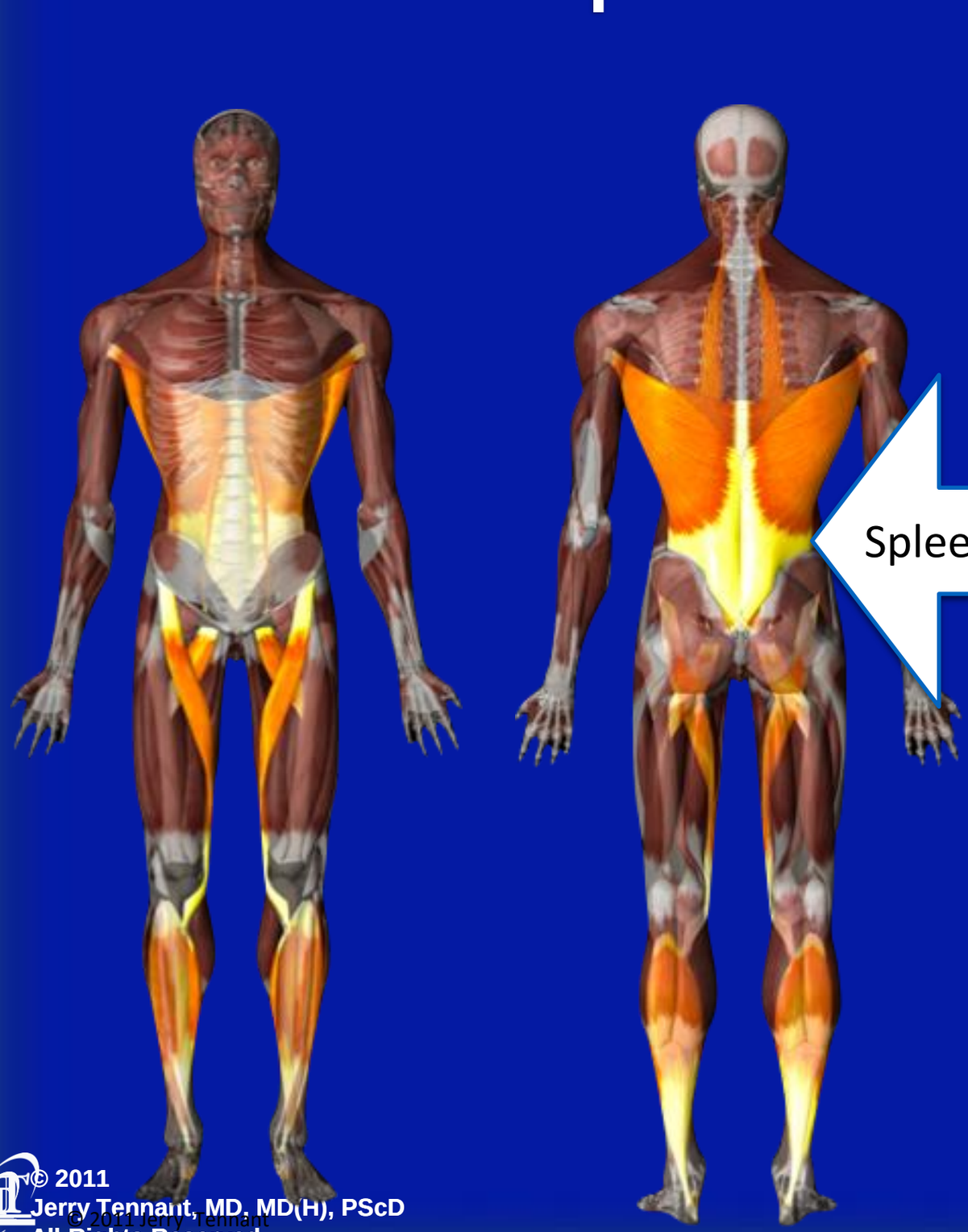
Hyperbaric Oxygen and Cancer

- 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.

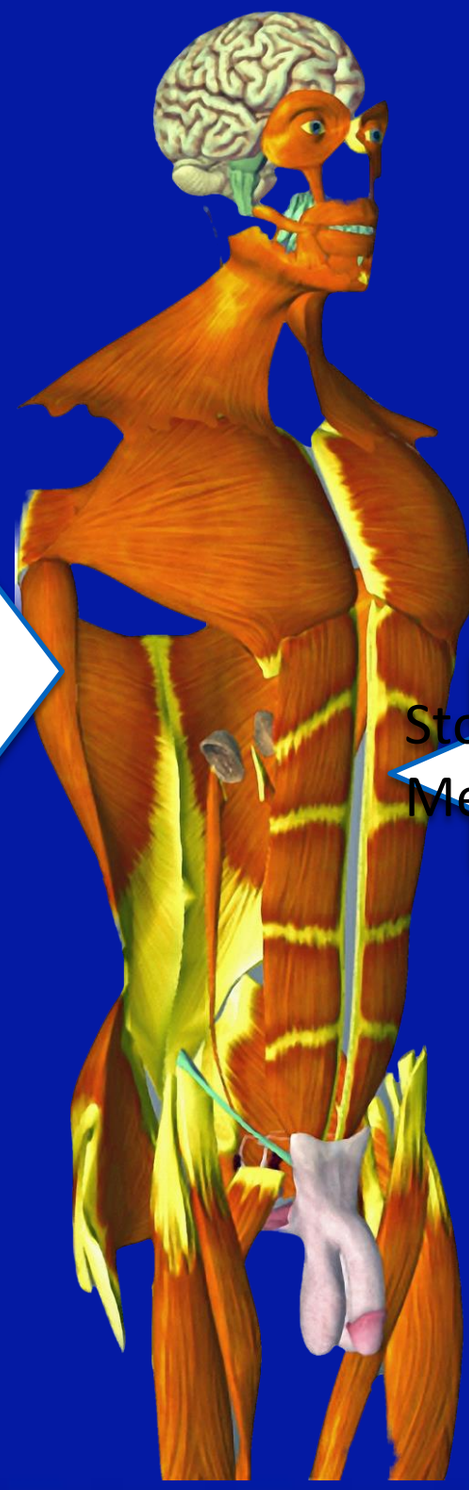


Spleen

Spleen Meridian



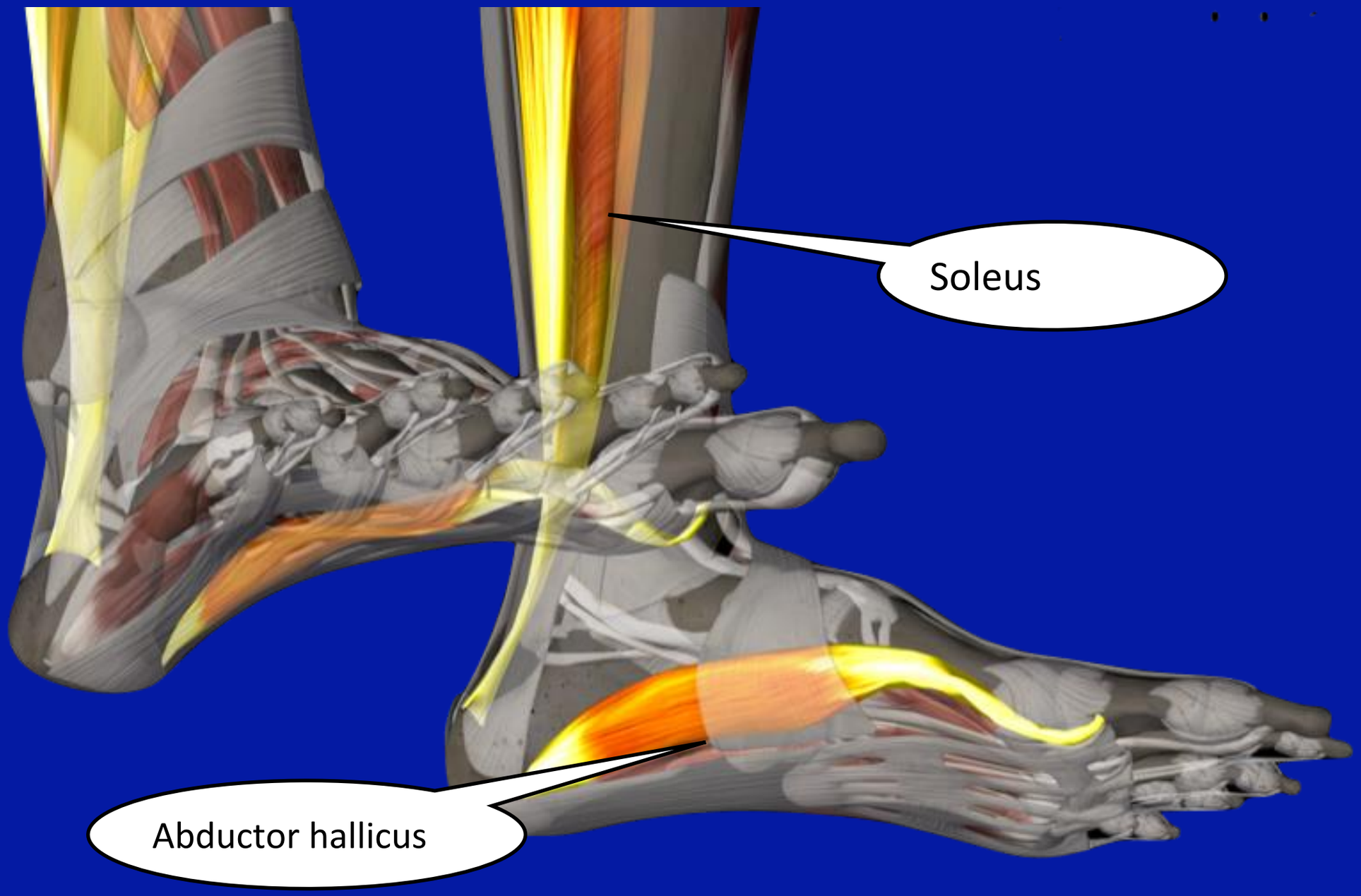
Spleen Meridian



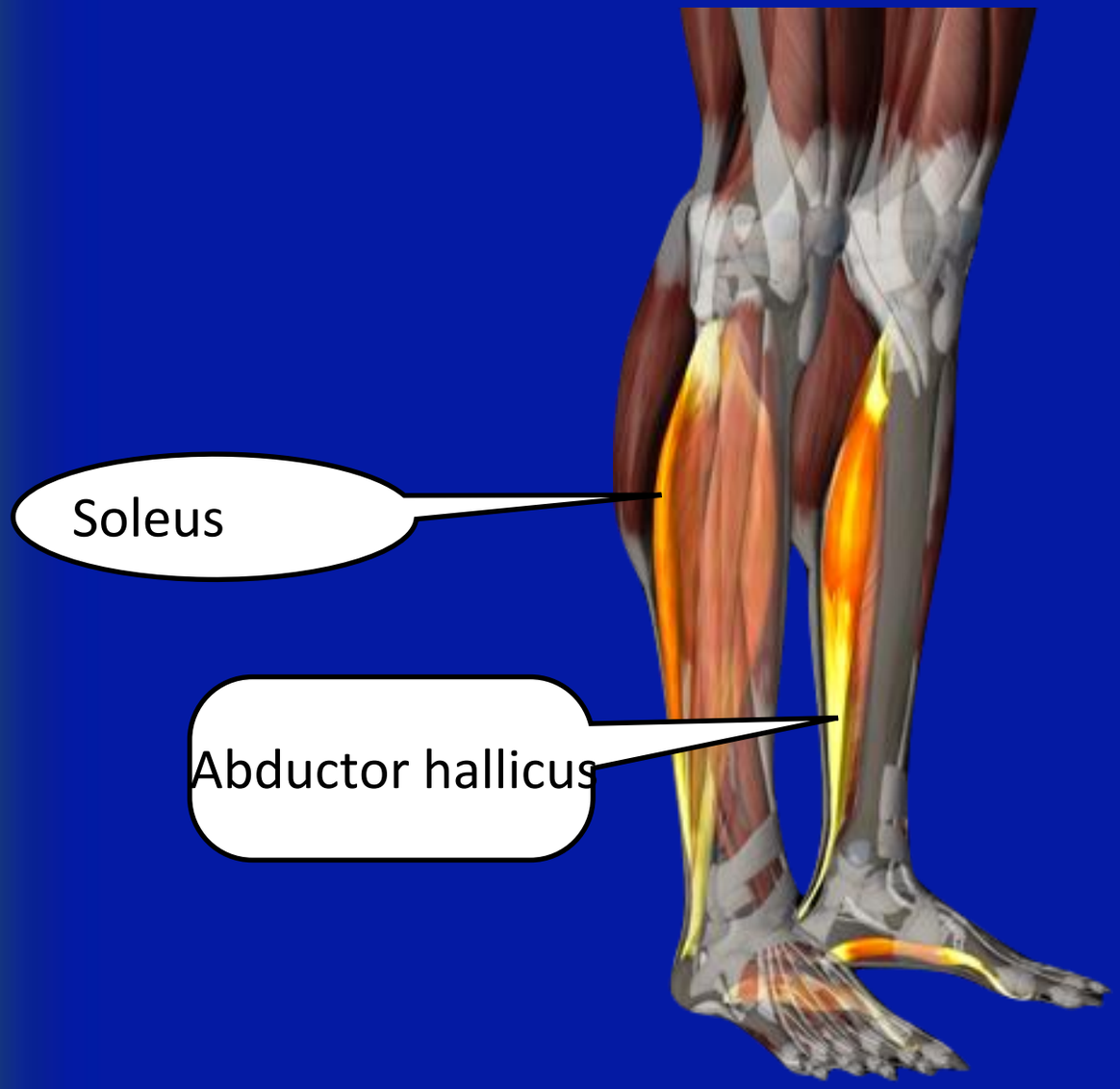
Stomach Meridian

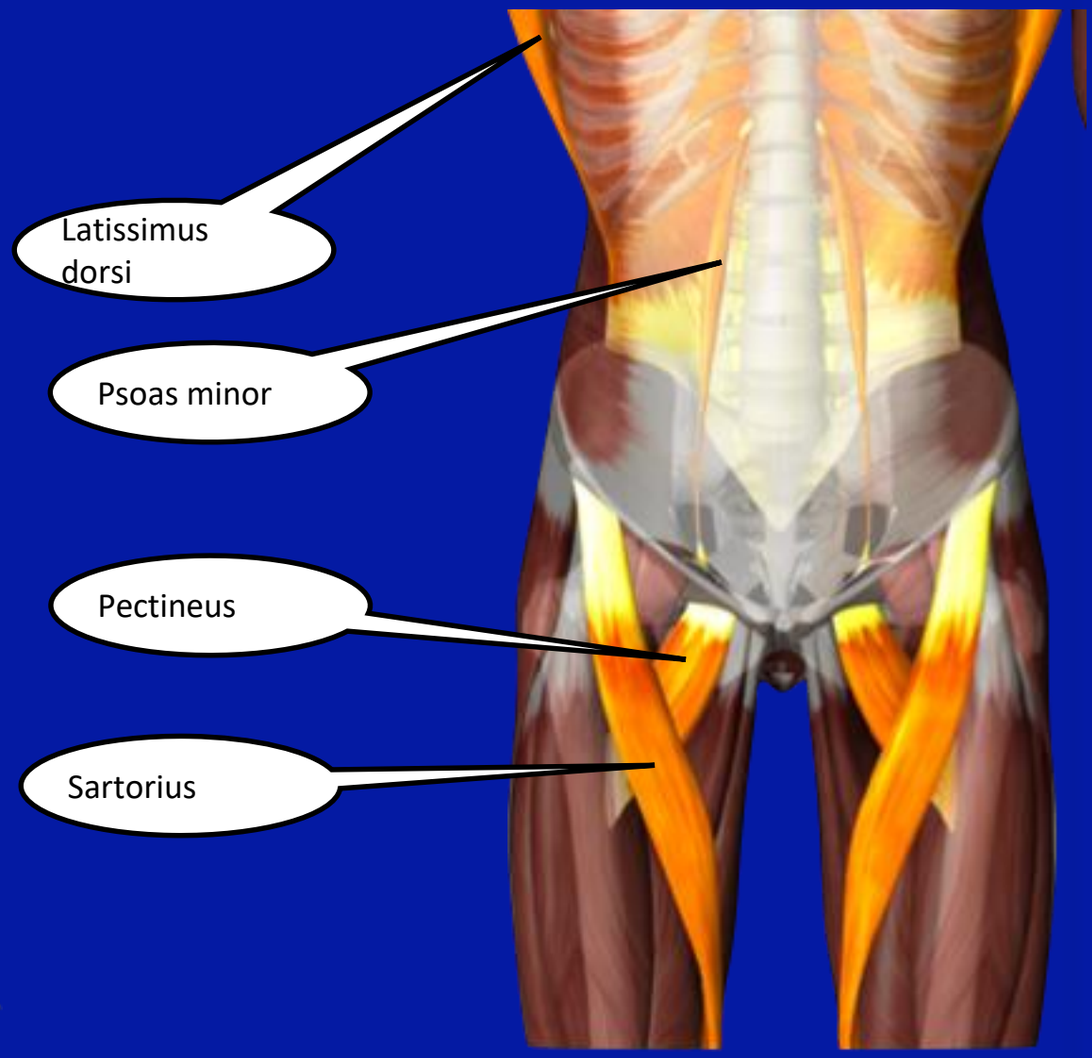
© 2011 Jerry Tennant

Spleen



Spleen





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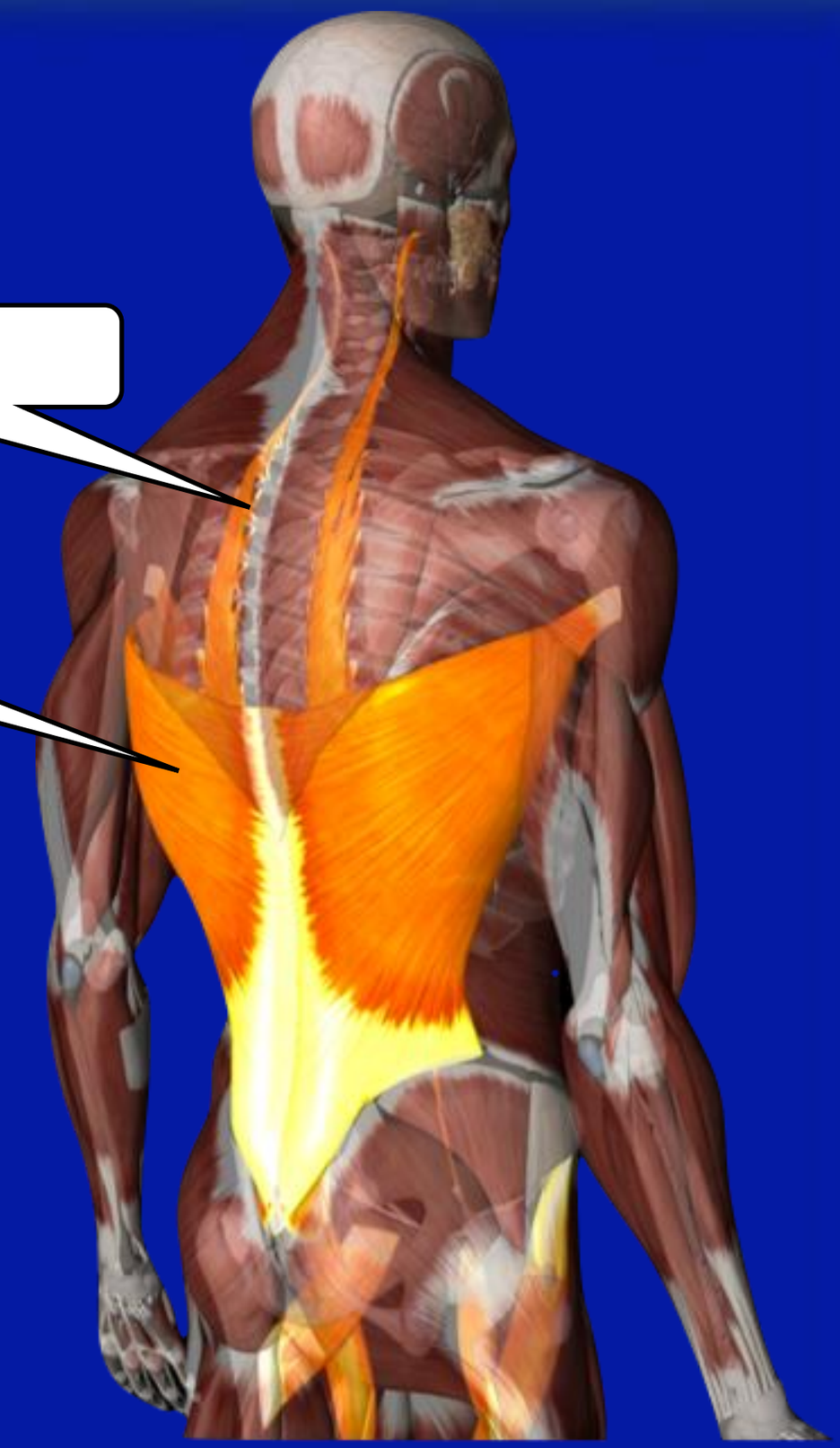
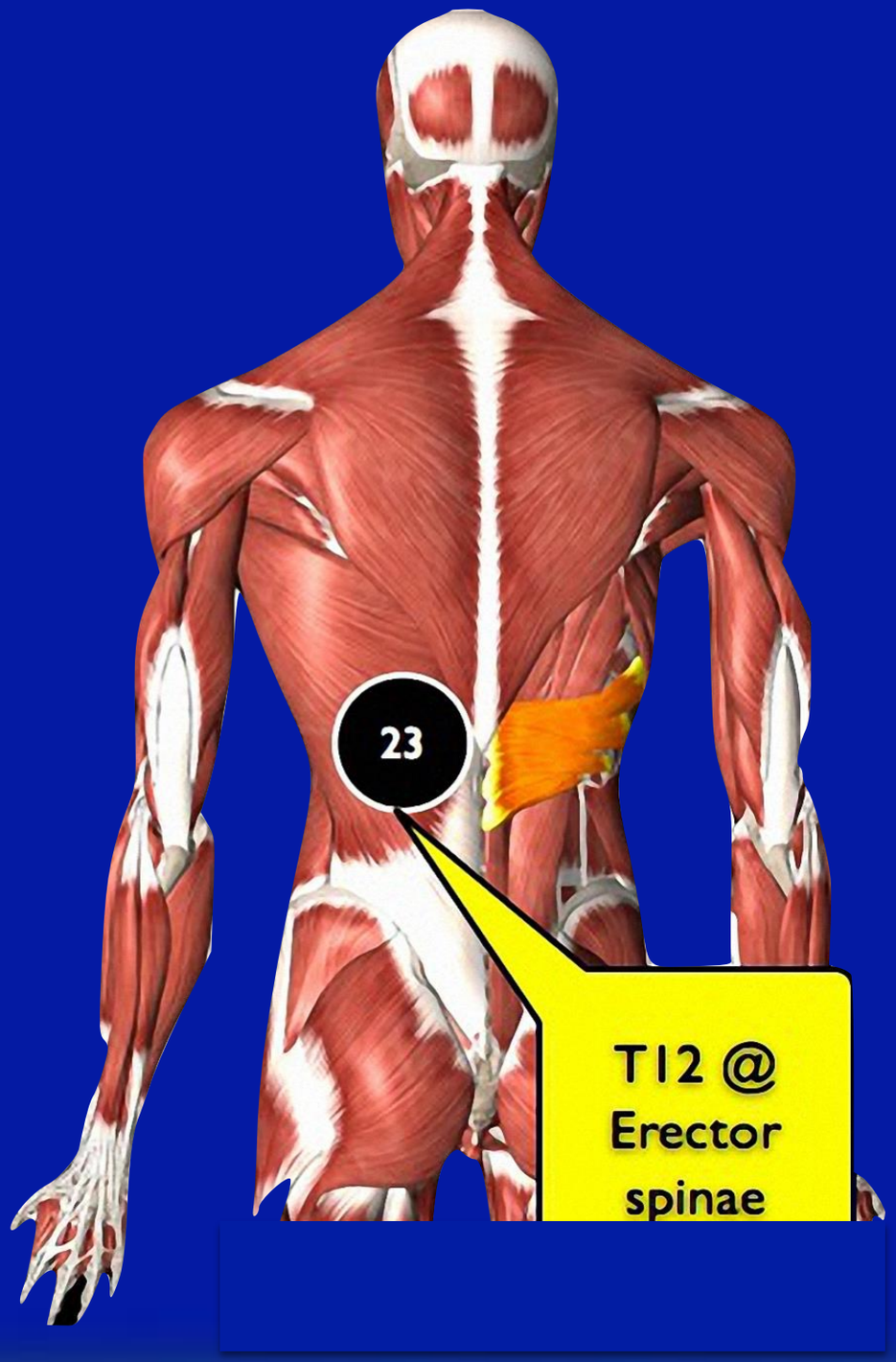


Spleen BioTerminals



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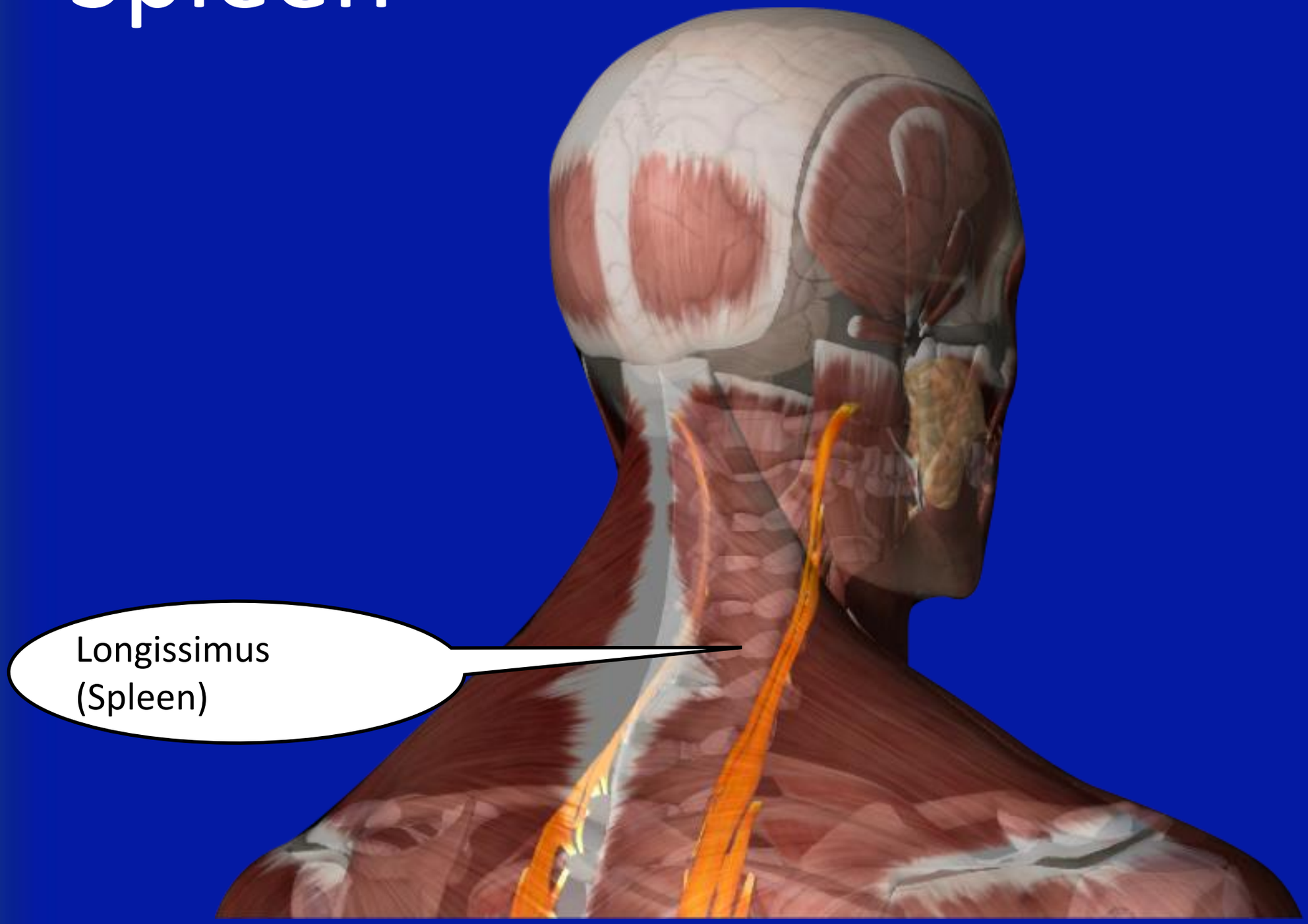
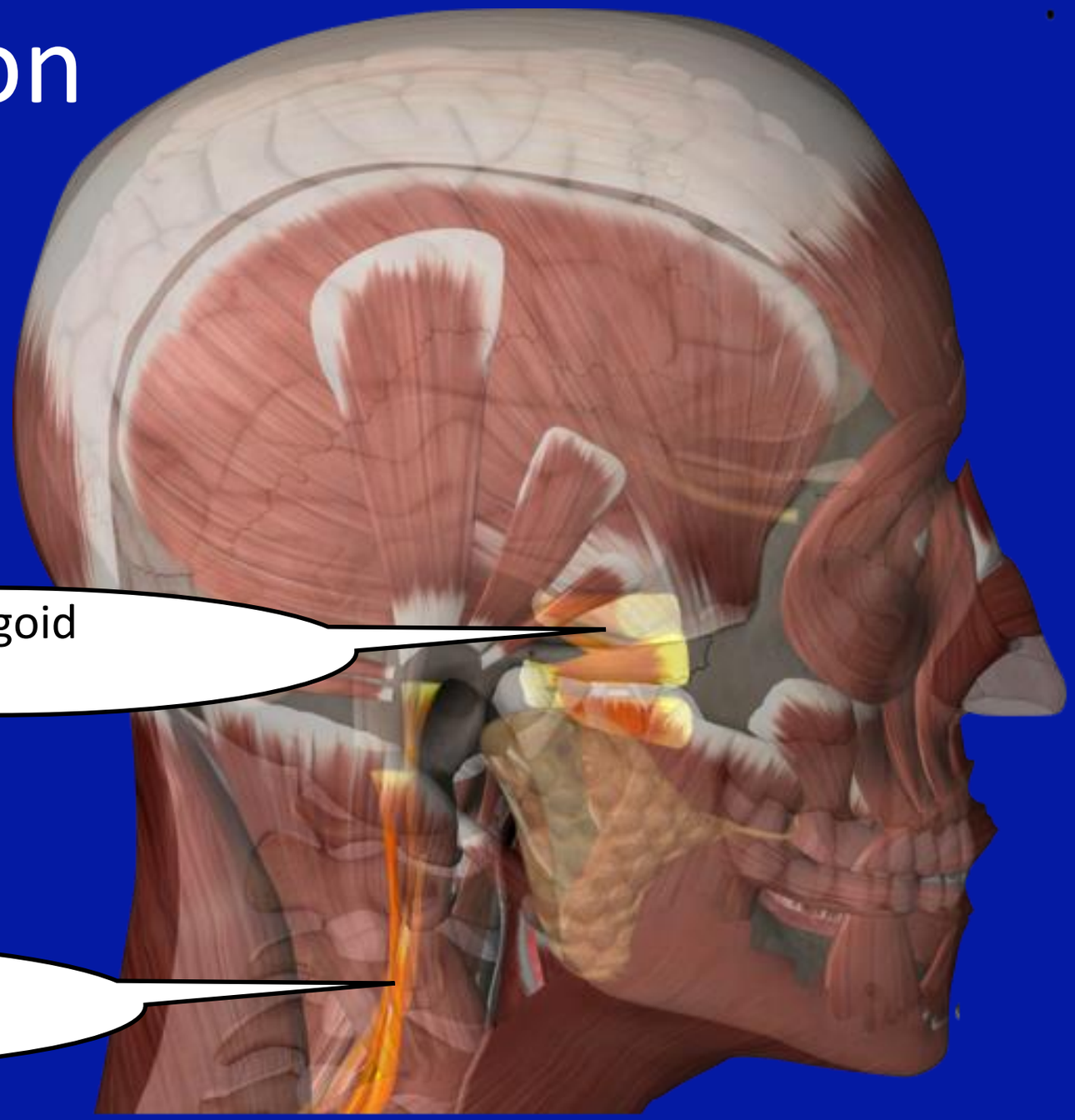


Spleen/Stomach Connection

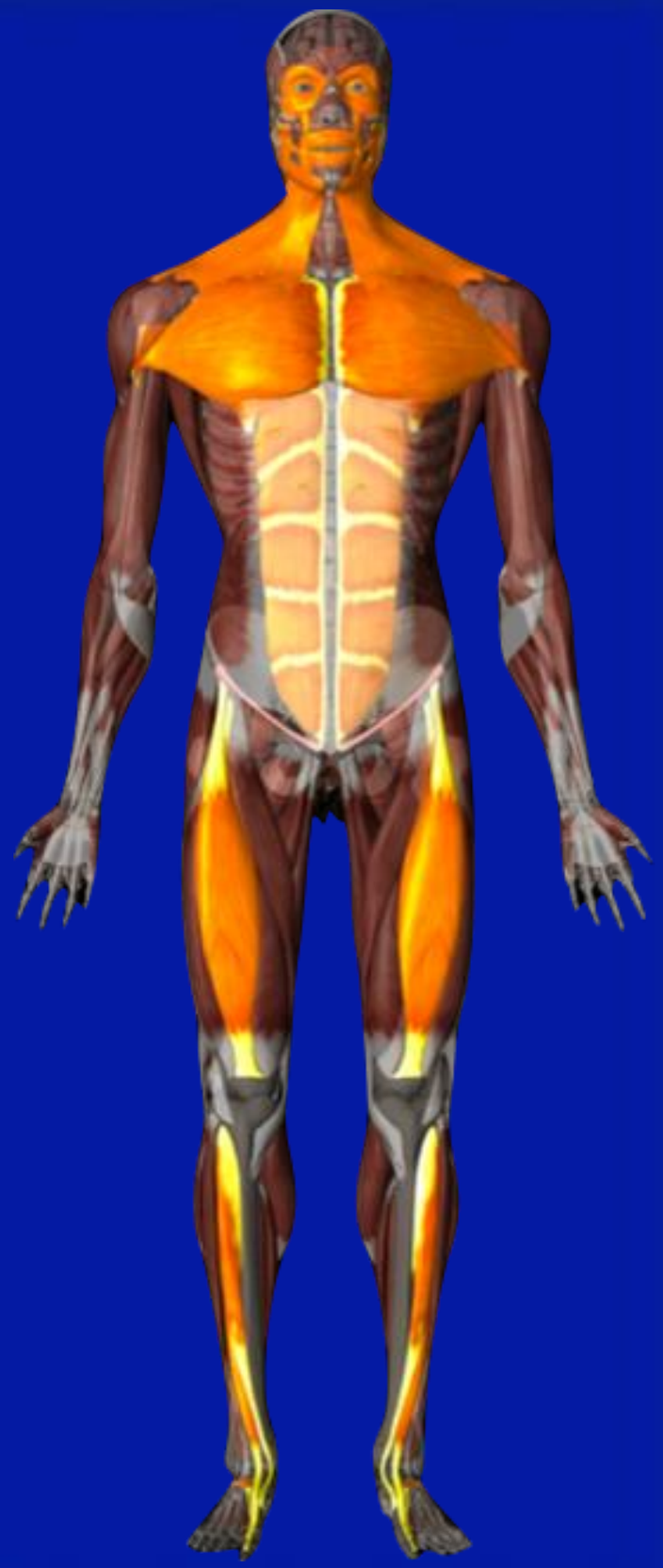


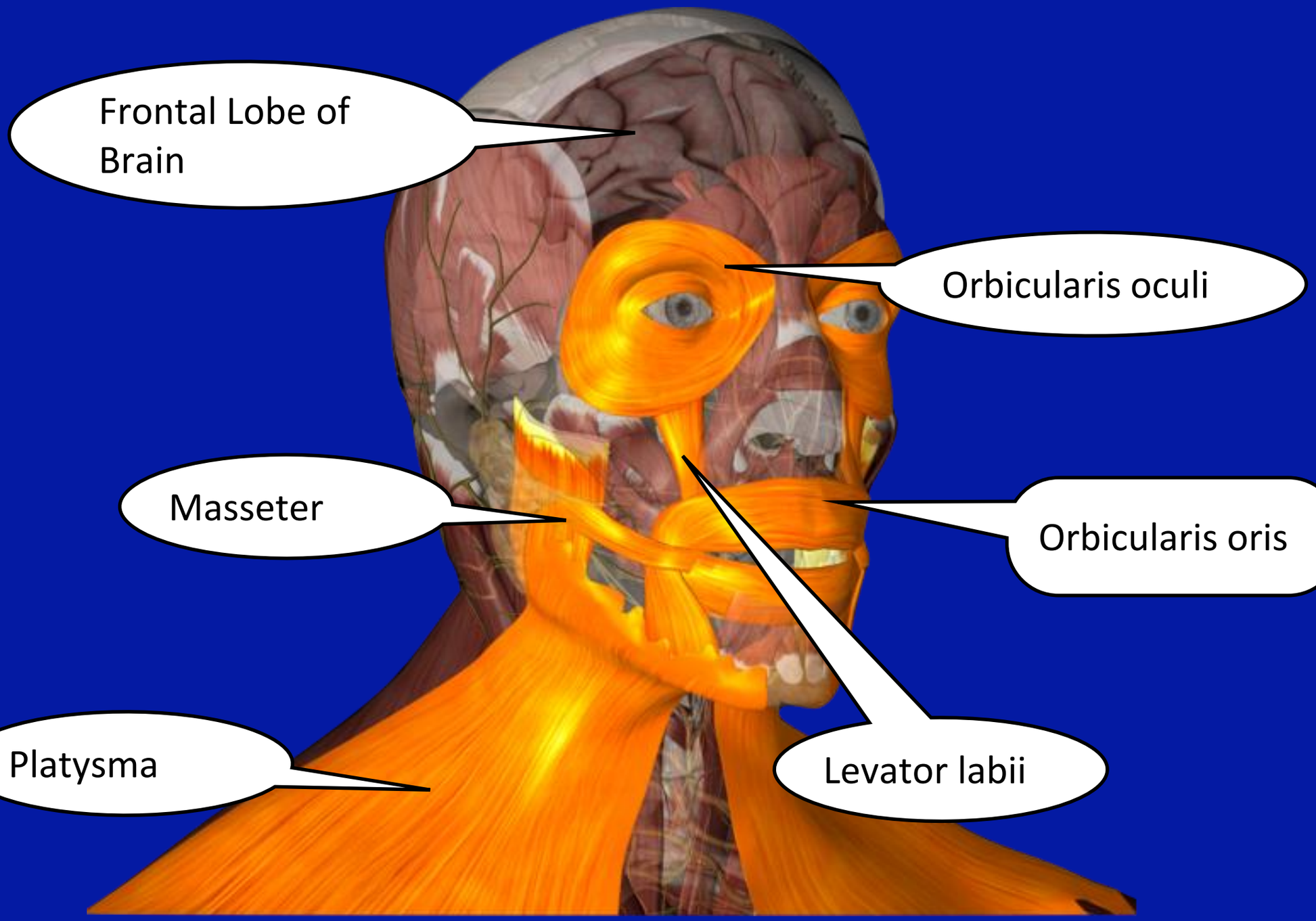
Lateral pterygoid (Stomach)

Longissimus capitus (Spleen)

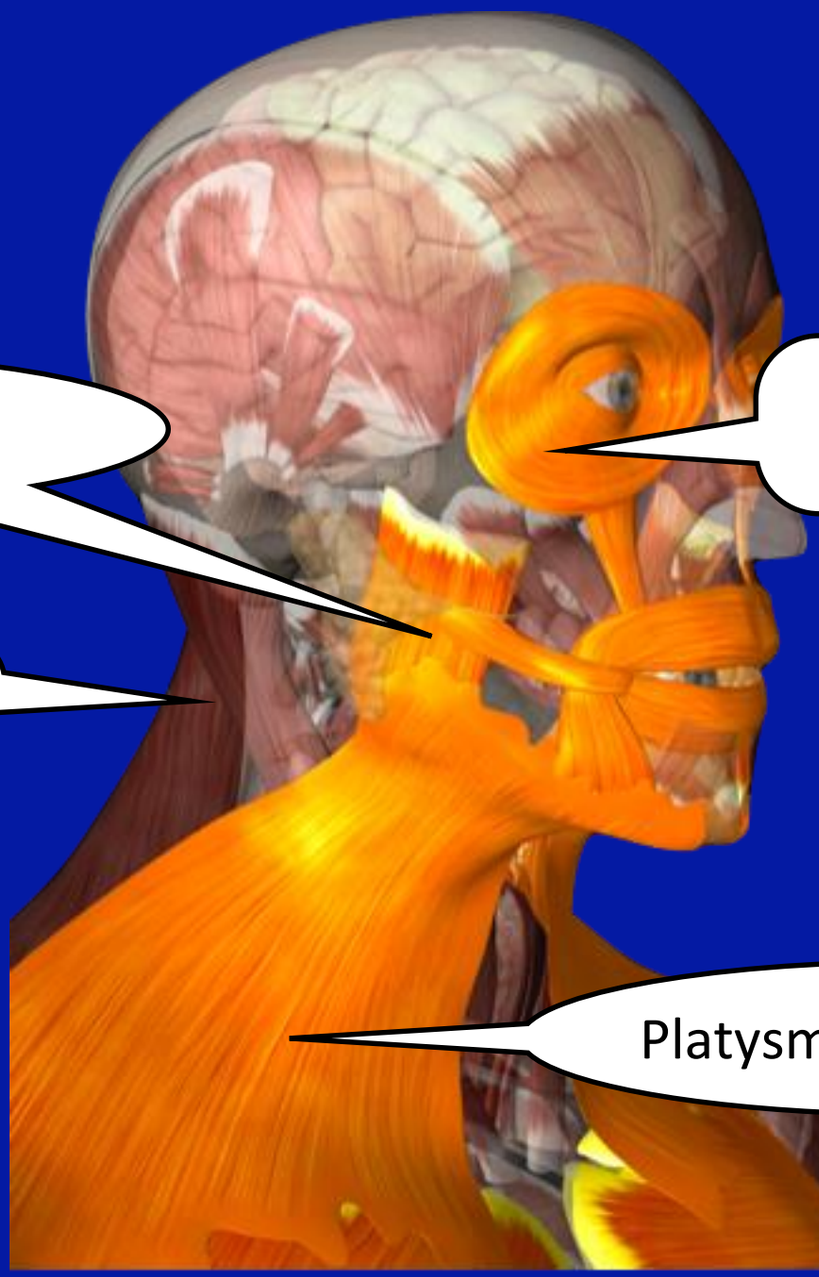
Stomach

Stomach





Spleen to Stomach



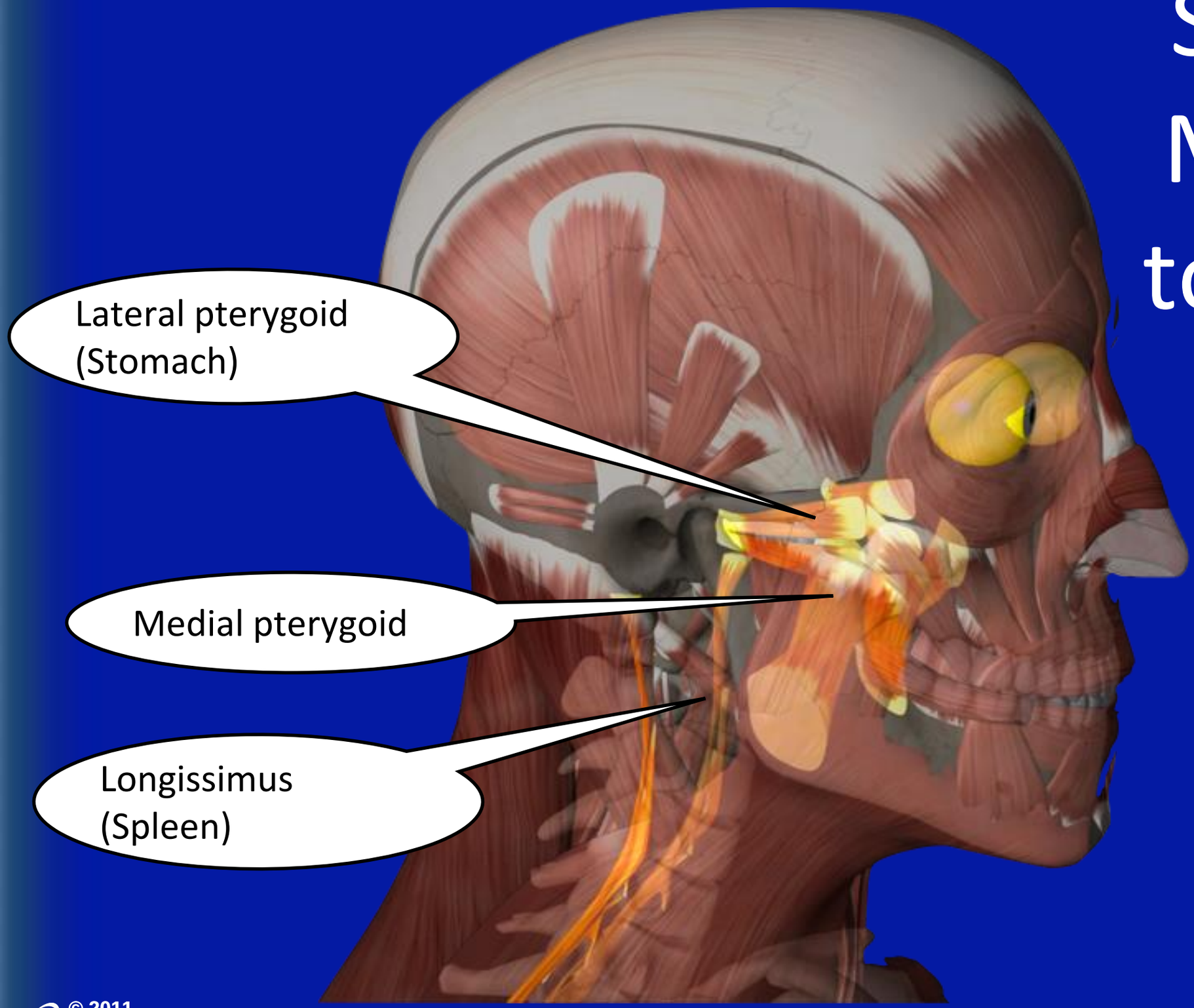
Masseter (Stomach)

Orbicularis oculi (Stomach)

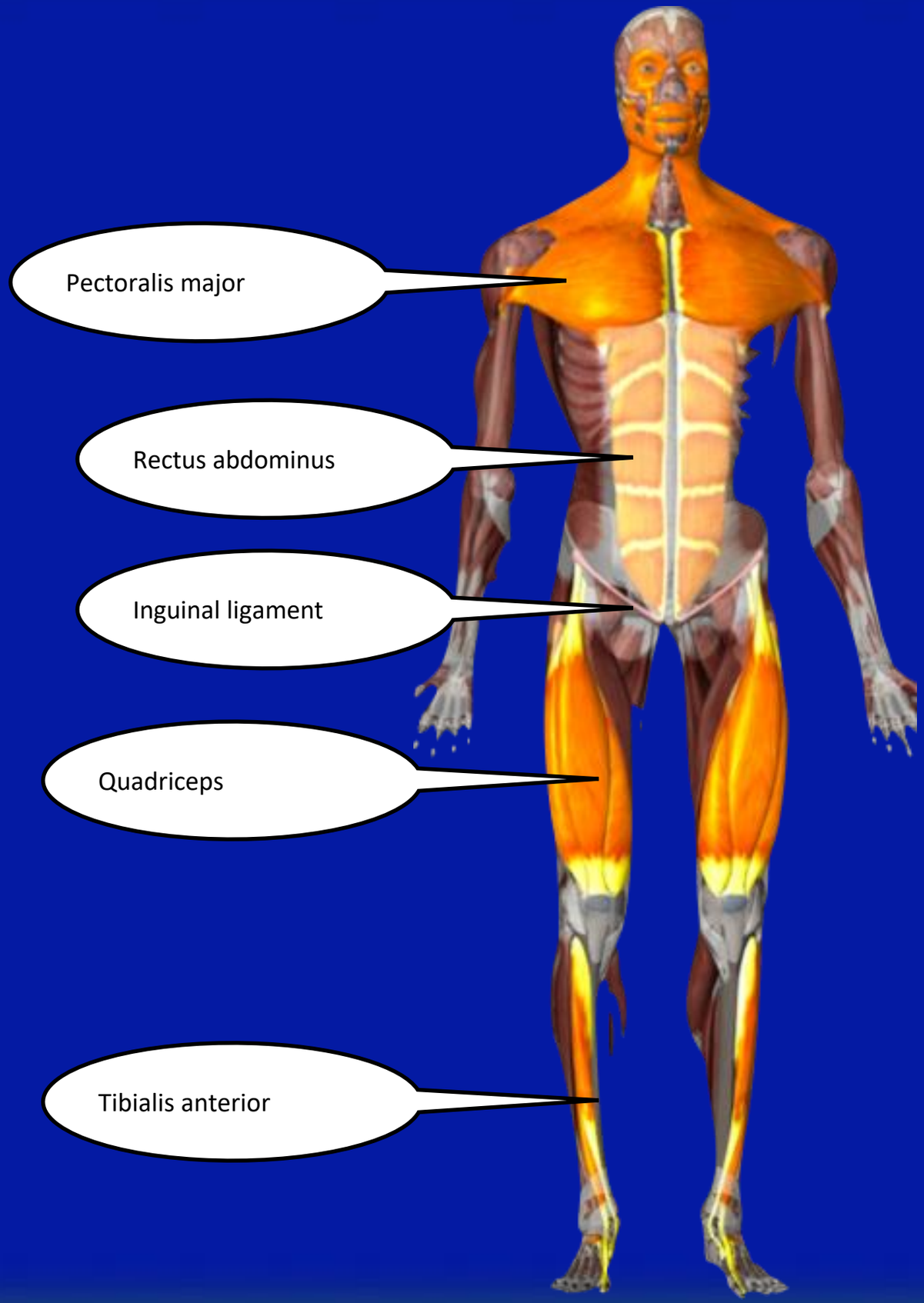
Longissimus (Spleen)

Platysma (Stomach)

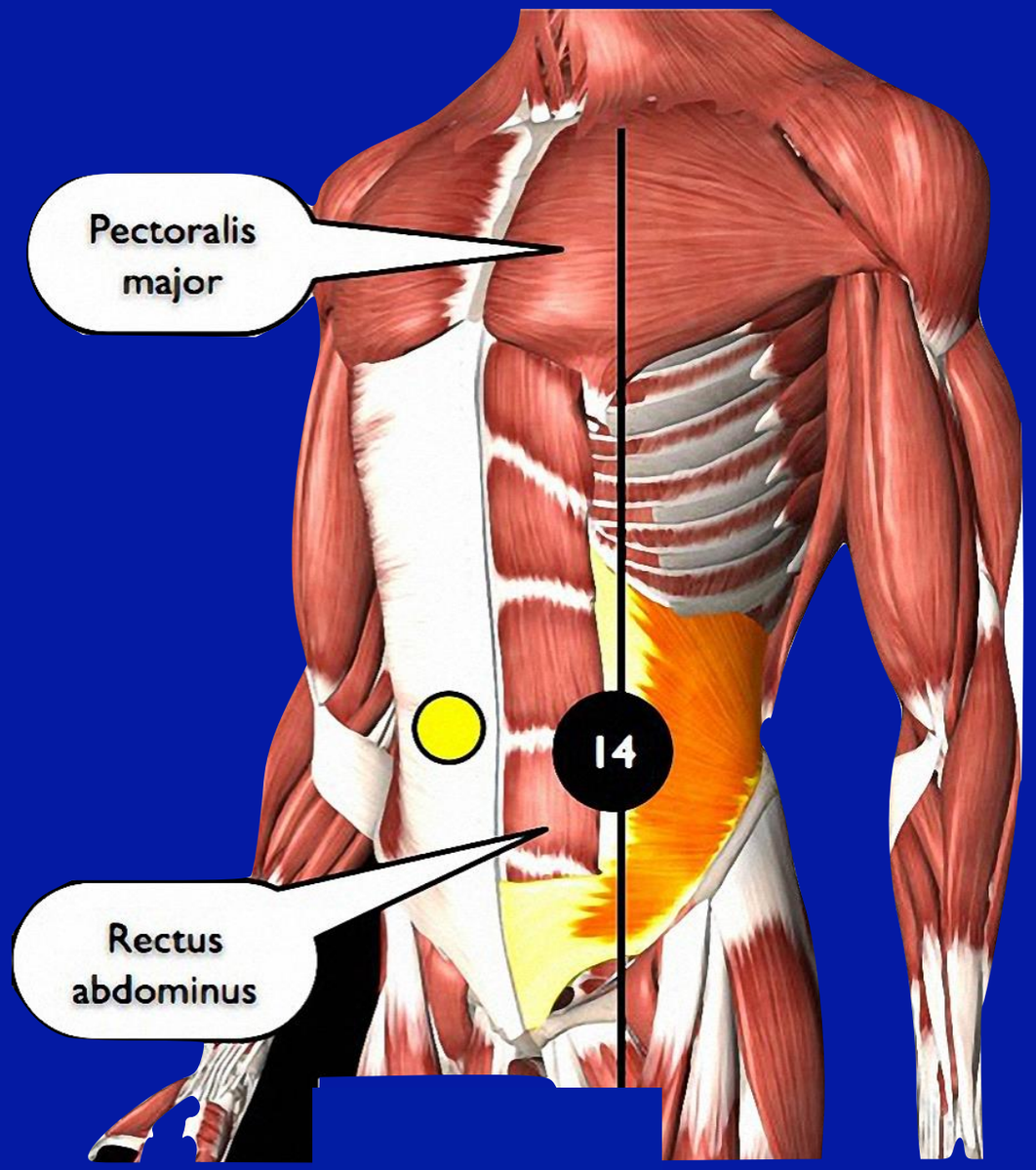
Stomach Meridian to Macula



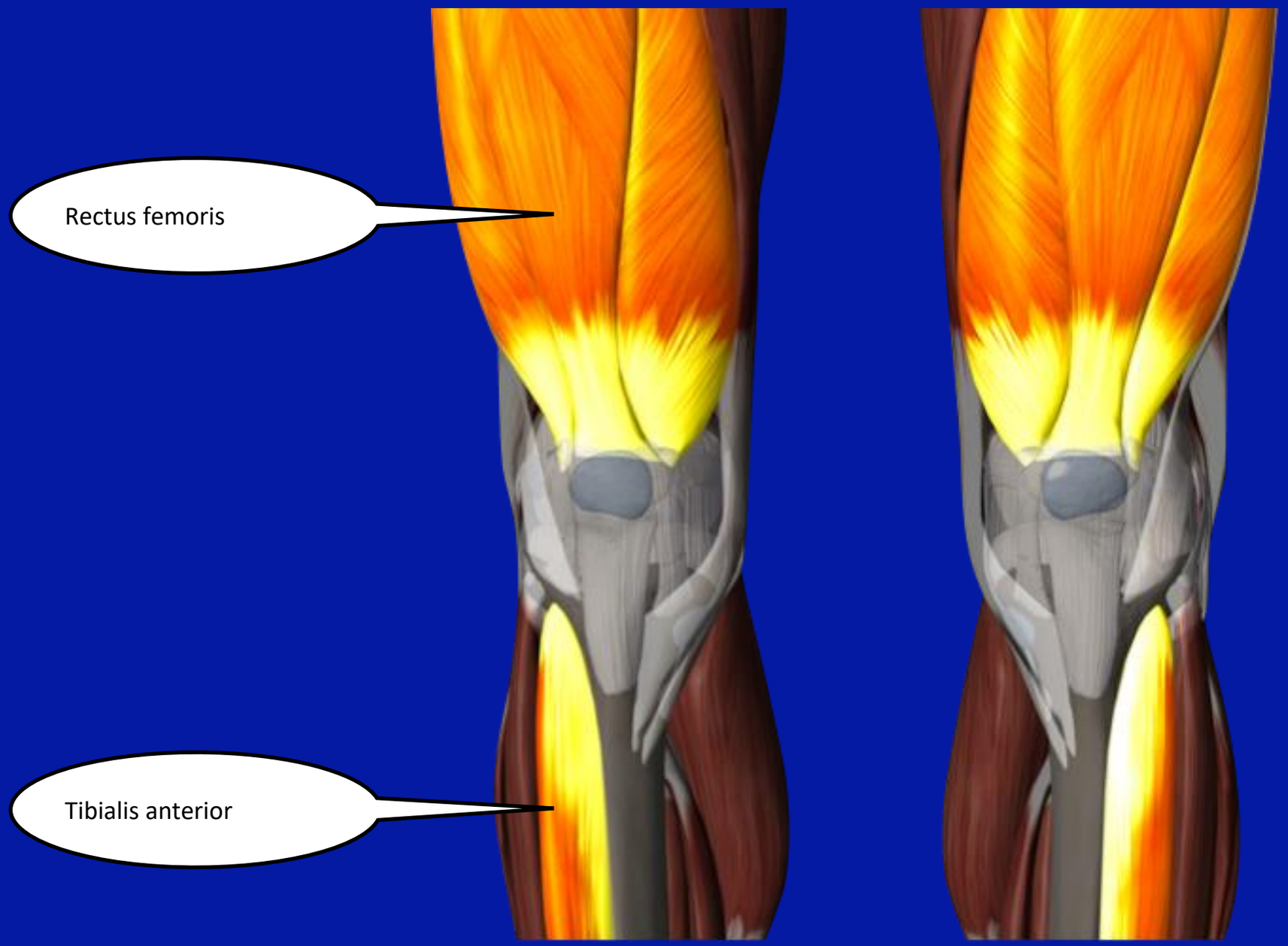
Stomach



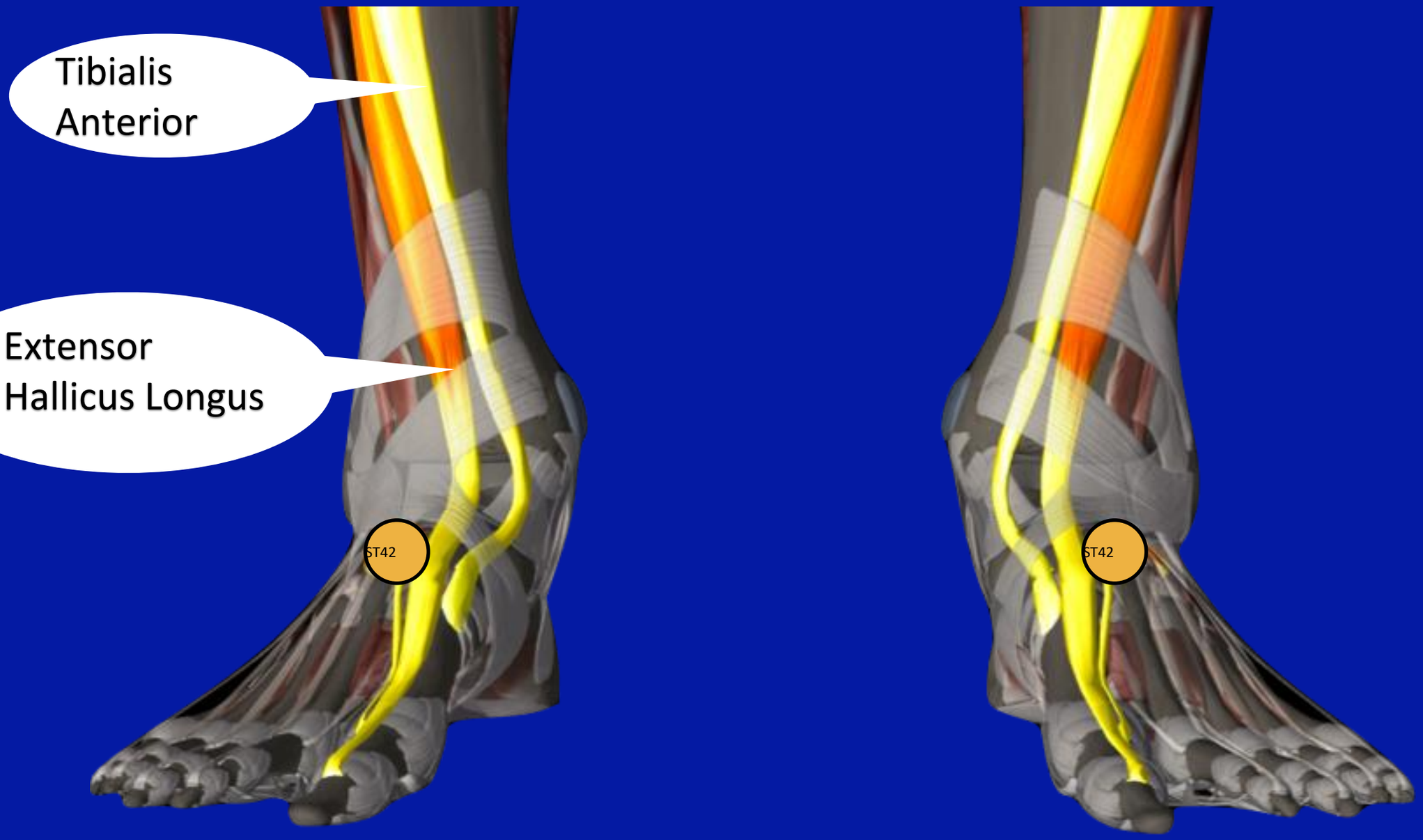
Stomach BioTerminals



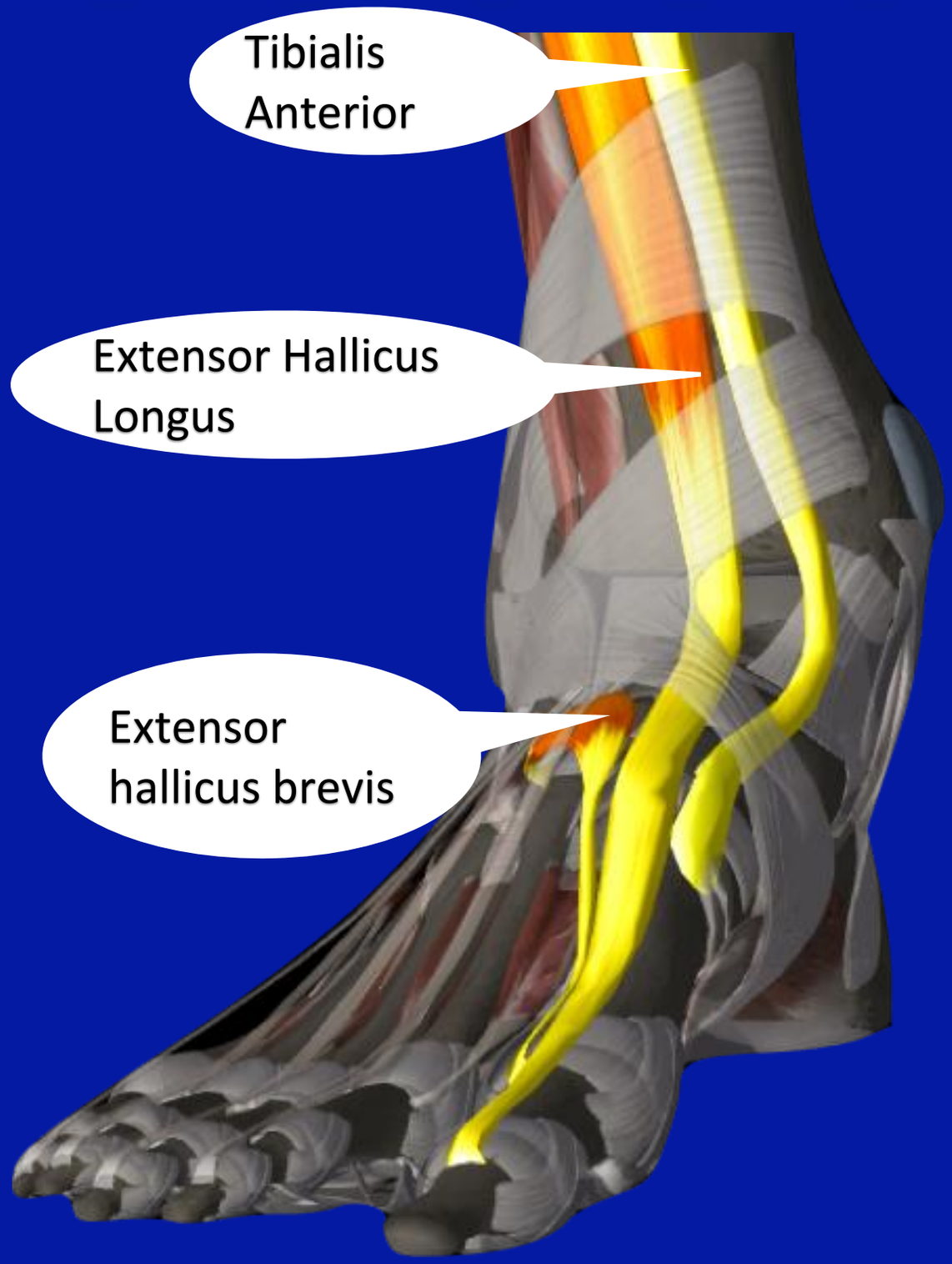
Stomach at Knee



Tibialis Anterior to Extensor Hallicus Longus



Stomach

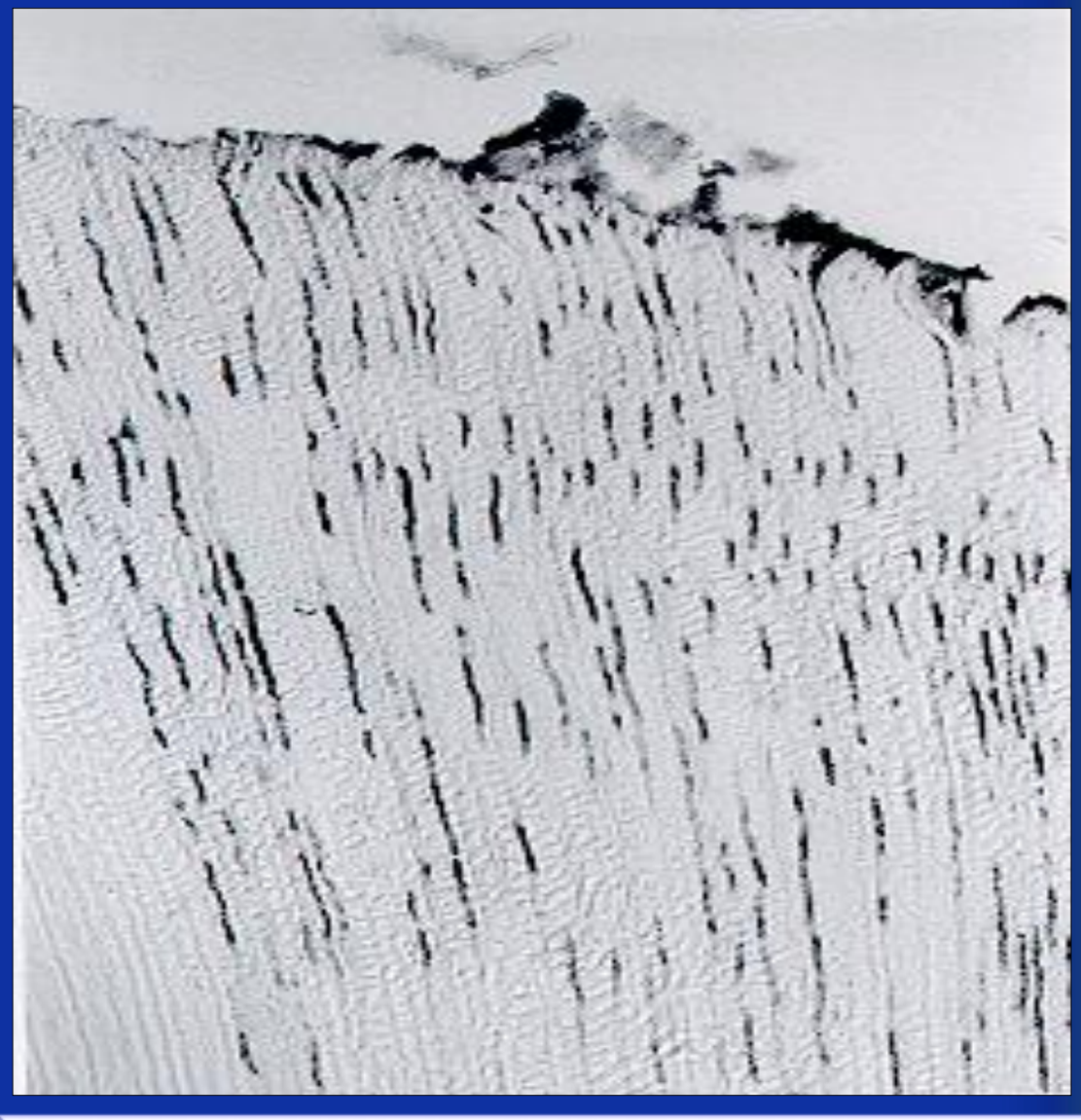


Dental Infections Act Like Circuit Breakers

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Loneliness, Acute Grief, Humiliated, Trapped, Inhibited, Greed, Not lovable	Anxiety, Self-Punishment, Broken Power, Hate, Low self-worth, Obsessed		Chronic Grief, Overcritical, Sadness, Controlling, Feeling trapped, Dogmatic, Compulsive, Uptight		Anger, Resentment Frustration, Blaming, Incapable to take action, Manipulative	Fear, Shame, Guilt, Broken will, Shyness, Helpless Deep exhaustion		Fear, Shame, Guilt, Broken will, Shyness, Helpless Deep exhaustion		Anger, Resentment Frustration, Blaming, Incapable to take action, Manipulative	Chronic Grief, Overcritical, Sadness, Controlling, Feeling trapped, Dogmatic, Compulsive, Uptight		Anxiety, Self-Punishment, Broken Power, Hate, Low self-worth, Obsessed		Loneliness, Acute Grief, Humiliated, Trapped, Inhibited, Greed, Not lovable
Duodenum Middle Ear, Shoulder Elbow, CNS	Sinus: Maxillary Oropharynx, Larynx		Sinus: Paranasal and Ethmoid, Bronchus, Nose		Sinus: Sphenoid Palatine Tonsil Hip, Eye, Knee	Sinus: Frontal Pharyngeal Tonsil Genito-Urinary System		Sinus: Frontal Pharyngeal Tonsil Genito-Urinary System		Sinus: Sphenoid Palatine Tonsil Hip, Eye, Knee	Sinus: Paranasal and Ethmoid, Bronchus, Nose		Sinus: Maxillary Oropharynx Larynx		Ileum, Jejunum Middle Ear, Shoulder Elbow, CNS
Heart, Small Int., Circulation/Sex, Endocrine	**Pancreas Stomach**		**Lung Large Intestine**		**Liver Gallbladder**	**Kidney Bladder**		**Kidney Bladder**		**Liver Gallbladder**	**Lung Large Intestine**		**Stomach Spleen**		**Heart, Small Int., Circulation/Sex, Endocrine**
															
32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
															
Heart, Small Int., Circulation/Sex, Endocrine	**Lung Large Intestine**		**Pancreas Stomach**		**Liver Gallbladder**	**Kidney Bladder**		**Kidney Bladder**		**Liver Gallbladder**	**Spleen Stomach**		**Lung Large Intestine**		**Heart, Small Int., Circulation/Sex, Endocrine**
Shoulder, Elbow Ileum, Middle Ear Peripheral Nerves	Sinus: Paranasal and Ethmoid, Bronchus, Nose		Sinus: Maxillary Larynx, Lymph, Oropharynx Breast Knee		Sinus: Sphenoid Palatine Tonsil Hip, Eye Knee	Sinus: Frontal Ear, Pharyngeal Tonsil Genito-Urinary System		Sinus: Frontal Ear, Pharyngeal Tonsil Genito-Urinary System		Sinus: Sphenoid Palatine Tonsil Hip, Eye Knee	Sinus: Maxillary Larynx, Lymph, Oropharynx Breast Knee		Sinus: Paranasal and Ethmoid, Bronchus, Nose		Shoulder, Elbow Ileum, Jejunum, Middle Ear Peripheral Nerves
Loneliness, Acute Grief, Humiliated, Trapped, Inhibited, Greed, Not lovable	Chronic Grief, Overcritical, Sadness, Controlling, Feeling trapped, Dogmatic, Compulsive, Uptight		Anxiety, Self-Punishment, Broken Power, Hate, Low self-worth, Obsessed		Anger, Resentment Frustration, Blaming, Incapable to take action, Manipulative	Fear, Shame, Guilt, Broken will, Shyness, Helpless Deep exhaustion		Fear, Shame, Guilt, Broken will, Shyness, Helpless Deep exhaustion		Anger, Resentment Frustration, Blaming, Incapable to take action, Manipulative	Anxiety, Self-Punishment, Broken Power, Hate, Low self-worth, Obsessed		Chronic Grief, Overcritical, Sadness, Controlling, Feeling trapped, Dogmatic, Compulsive, Uptight		Loneliness, Acute Grief, Humiliated, Trapped, Inhibited, Greed, Not lovable

Acumeridian Tooth-Organ Relationships [with Autonomic/Neuropeptide Emotion correlations] -- from various sources Dr. Ralph Wilson, N.D.

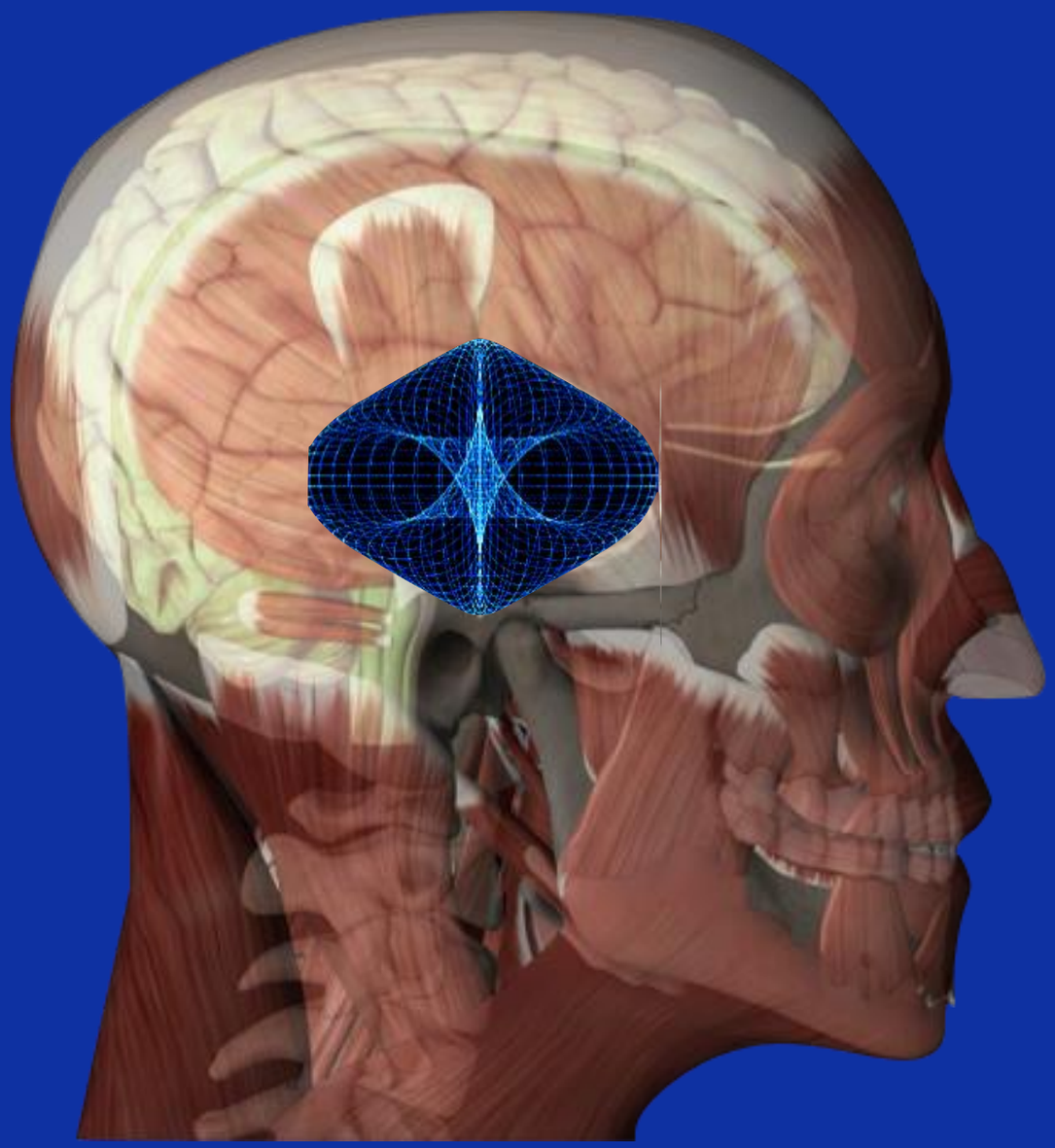
Nagaoka, et al, (1995) Bacterial Invasion Into Dental Tubules of Human Vital and Non-vital Teeth; J Endodon. 21 70-73

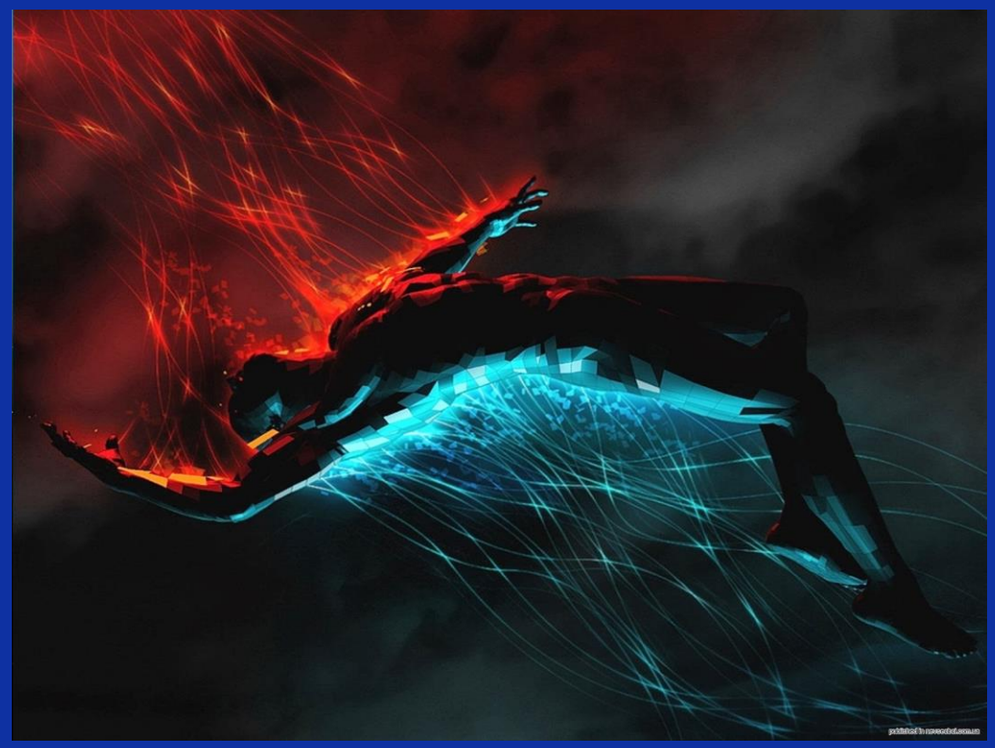


% Invaded Tubules: 1.1 39.0

(Brown-Brenn stain, x200 magnification)

Emotions are Stored as Magnetic Fields and Can Block a Circuit

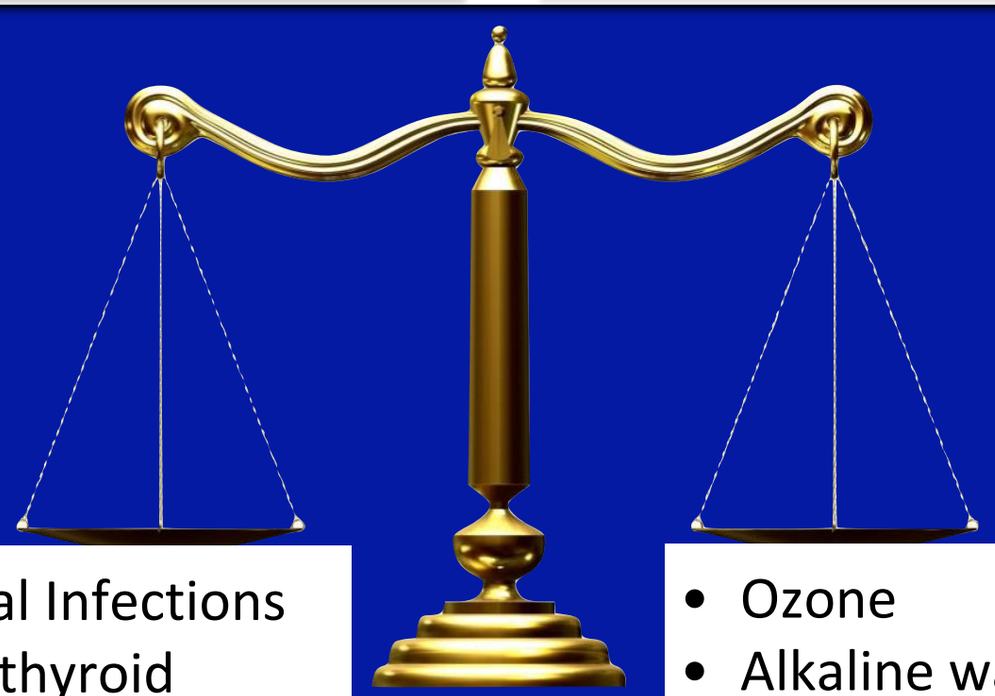




The Balance of Electrons Consumed/Generated vs. Electrons Used/Stolen

Chapters

+60 +50 +40 +30 +20 +10 | 0 | -10 -20 -30 -40 -50 -60



- 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

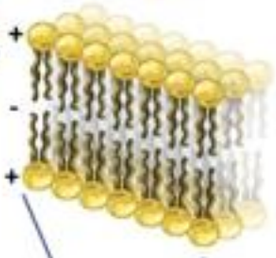
"The Tesla Circuit Concept"

Circuits Pass Though Teeth

6 Electrons charge the cell membrane, which is the "Battery" of the cell (Voltage)

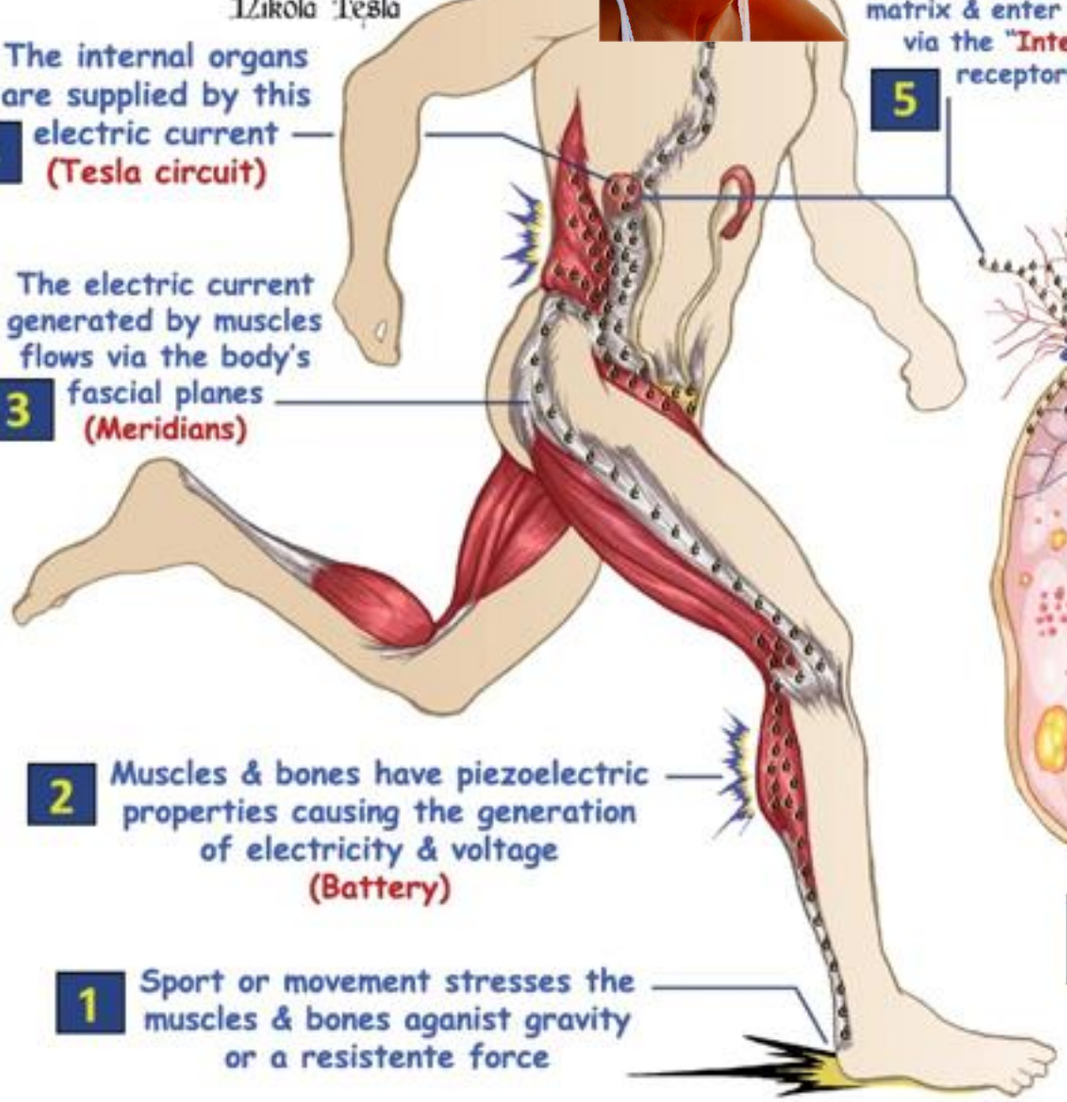
Electrons flow through the collagen in the extracellular matrix & enter the cell via the "Integrin" receptors 5

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) 7



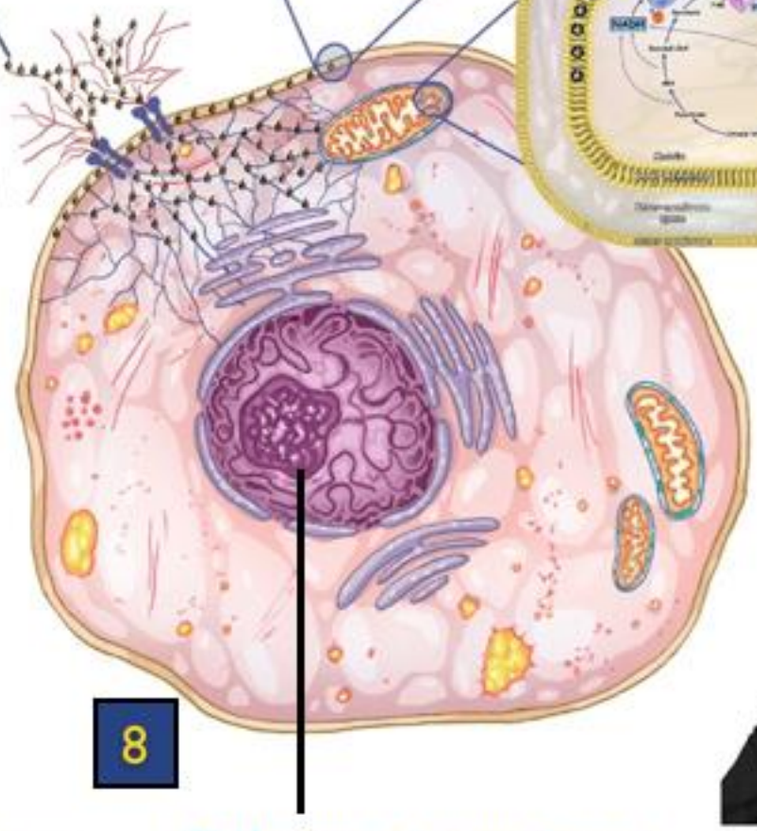
4 The internal organs are supplied by this electric current (Tesla circuit)

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

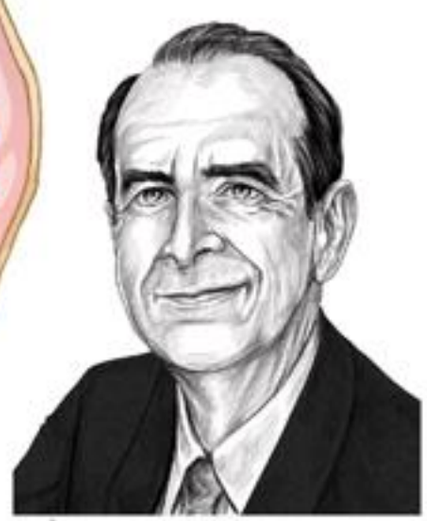


2 Muscles & bones have piezoelectric properties causing the generation of electricity & voltage (Battery)

1 Sport or movement stresses the muscles & bones aganist gravity or a resistente force



8 DNA contains its own battery.



Jerry Tennant

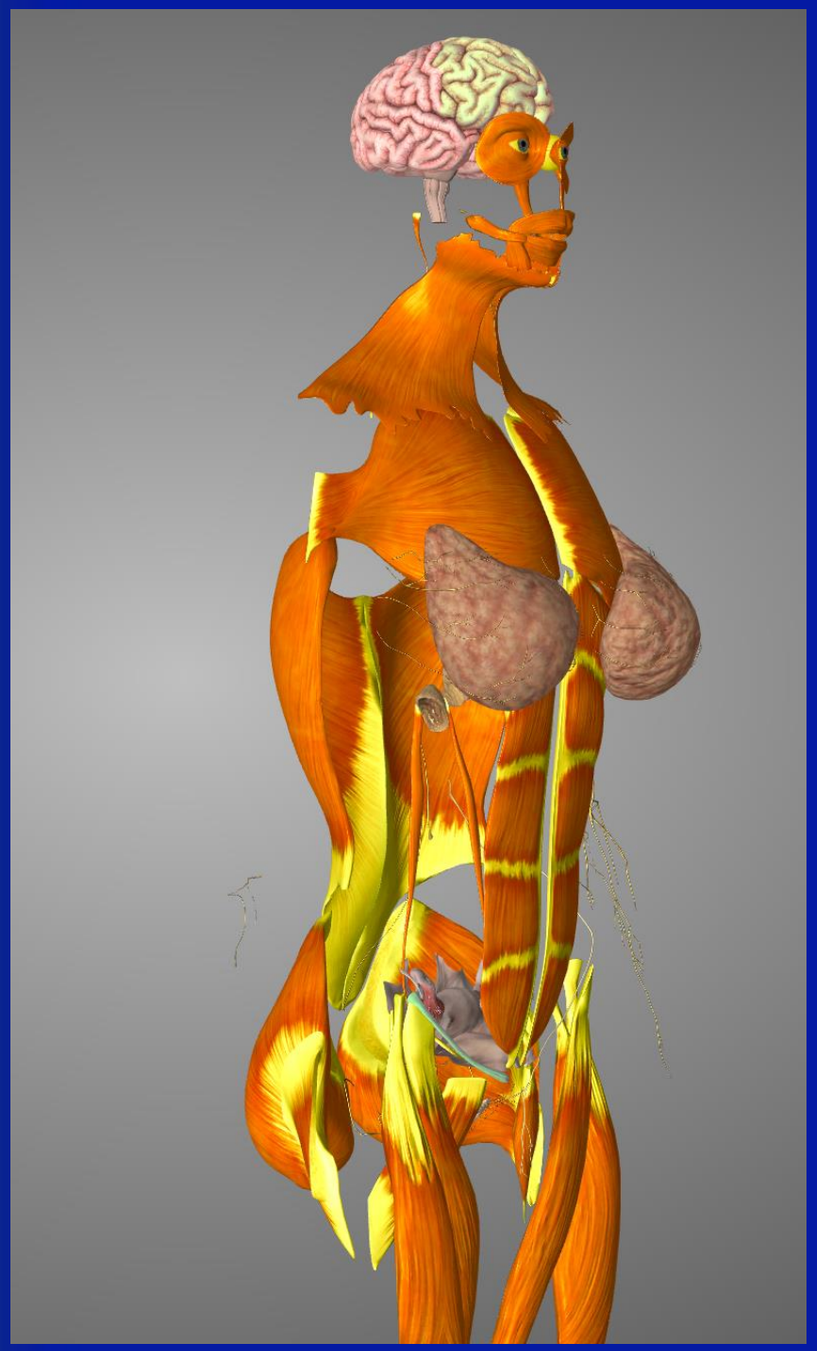
Graphic by Jarrah Al-Tubaikh, MD

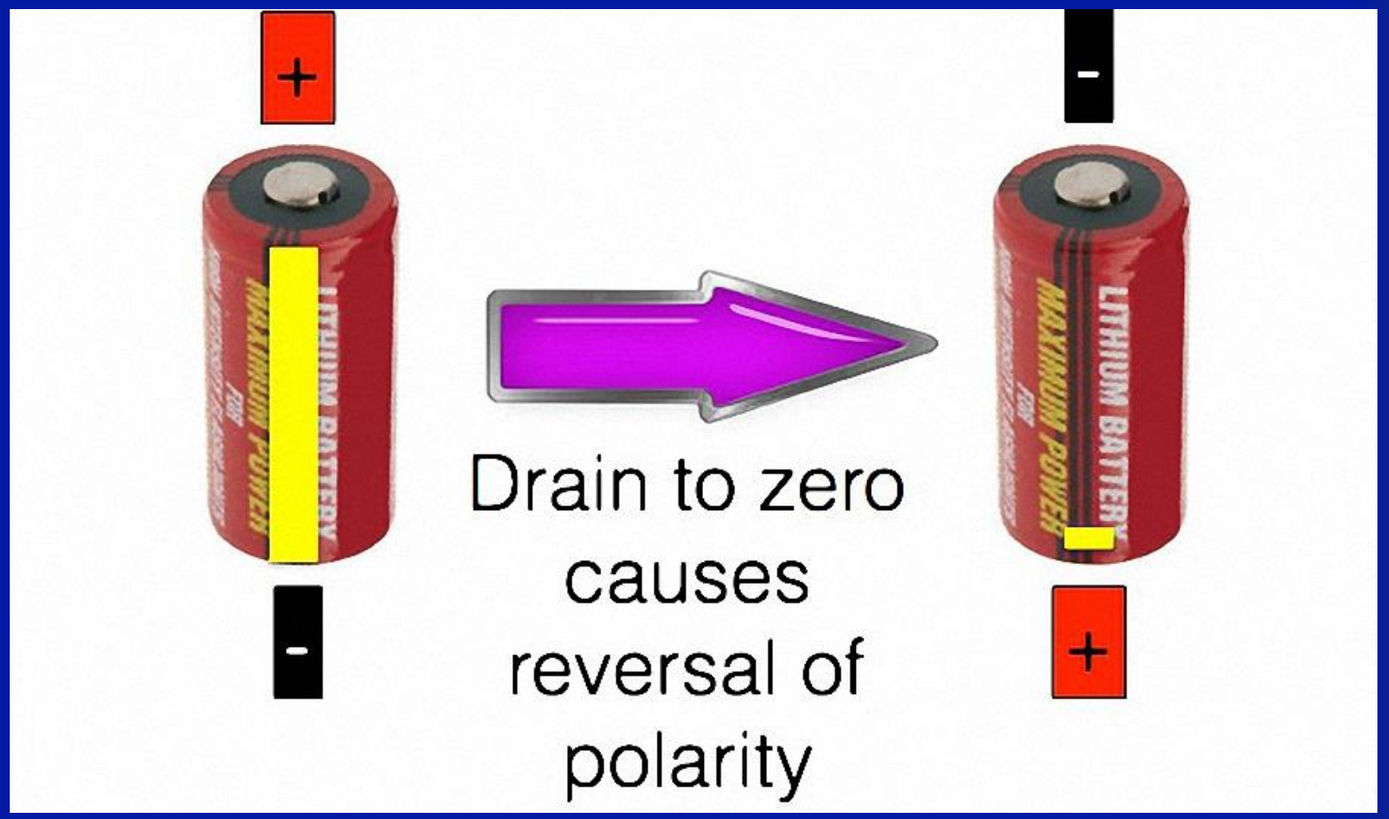
Index

Cancer: Polarity
The On-Off Switches

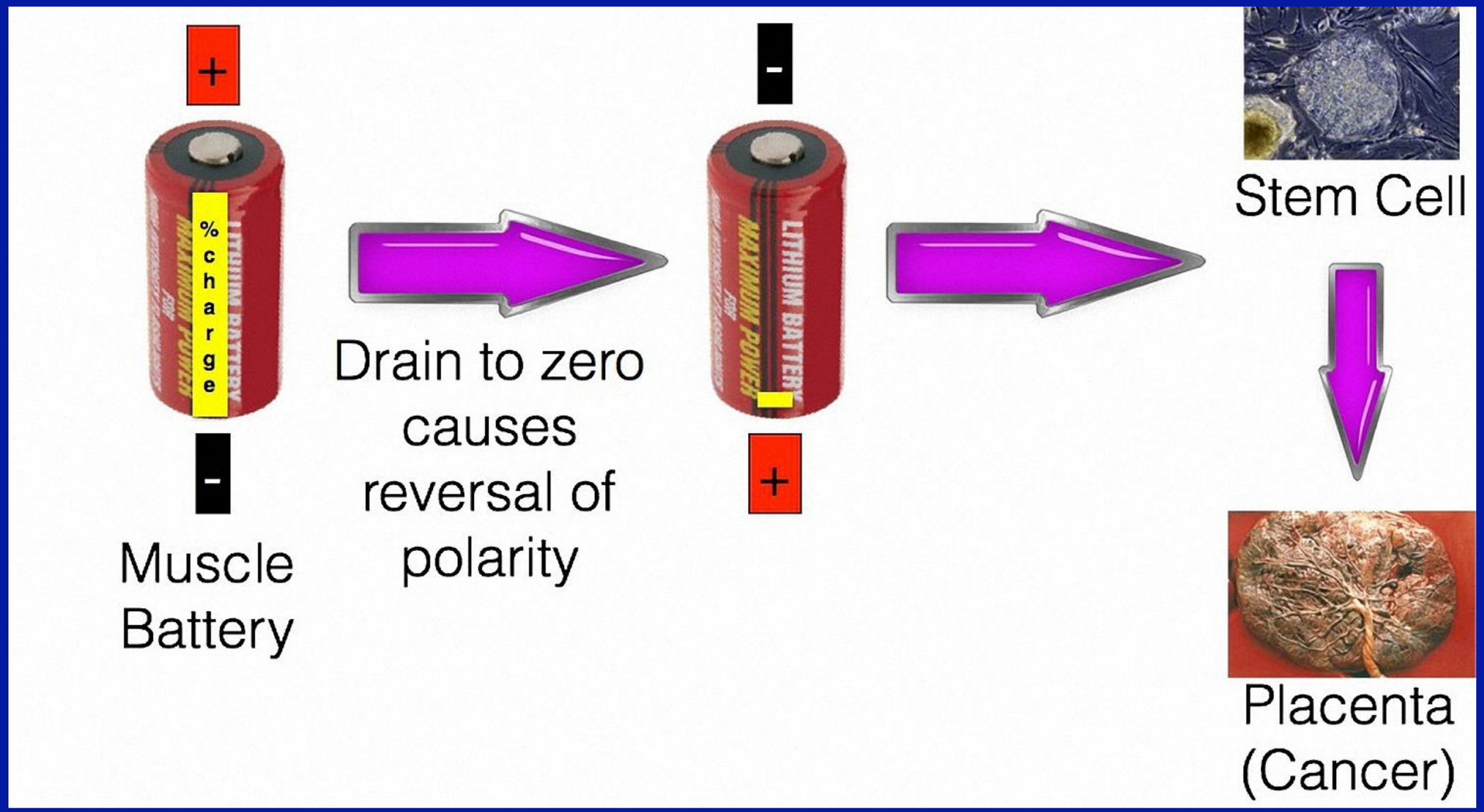
Cancer Not Due to Mutated Genes

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.




+
-
LITHIUM BATTERY
MAXIMUM POWER
-
+
LITHIUM BATTERY
MAXIMUM POWER
Drain to zero
causes
reversal of
polarity

The “On Switch” for Cancer is Draining a Muscle Battery to Zero



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

Tennant THEORY of Cancer

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.

Chapters

Tennant THEORY of Cancer

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.

Chapters

Tennant THEORY of Cancer

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.

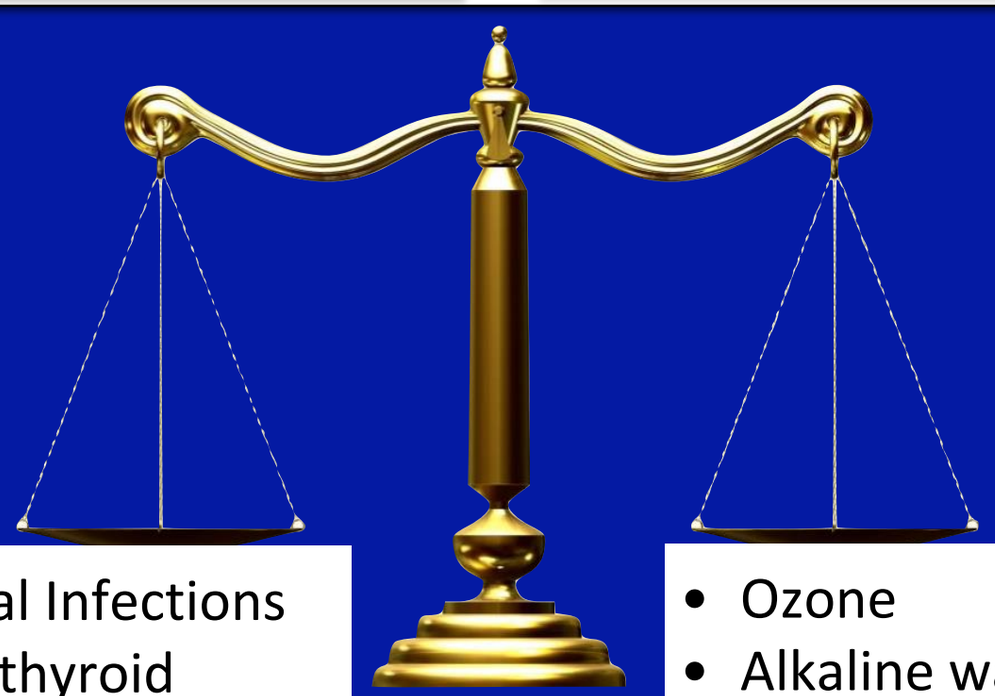
14. I don't think one can ever overcome the toxins from a root canal with anything—it must be removed and the infected bone cleared.

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.

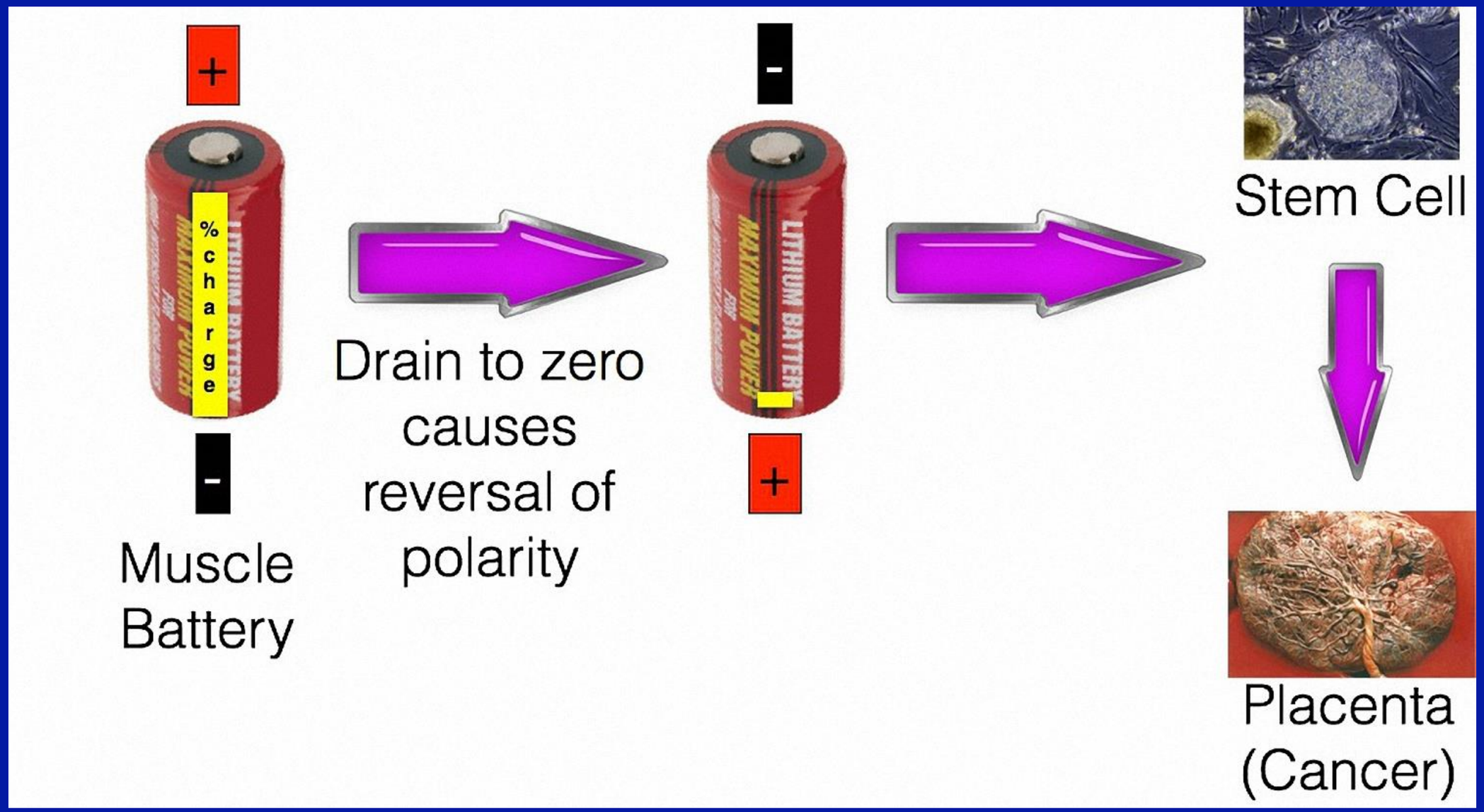
+60 +50 +40 +30 +20 +10 | 0 | -10 -20 -30 -40 -50 -60



- 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



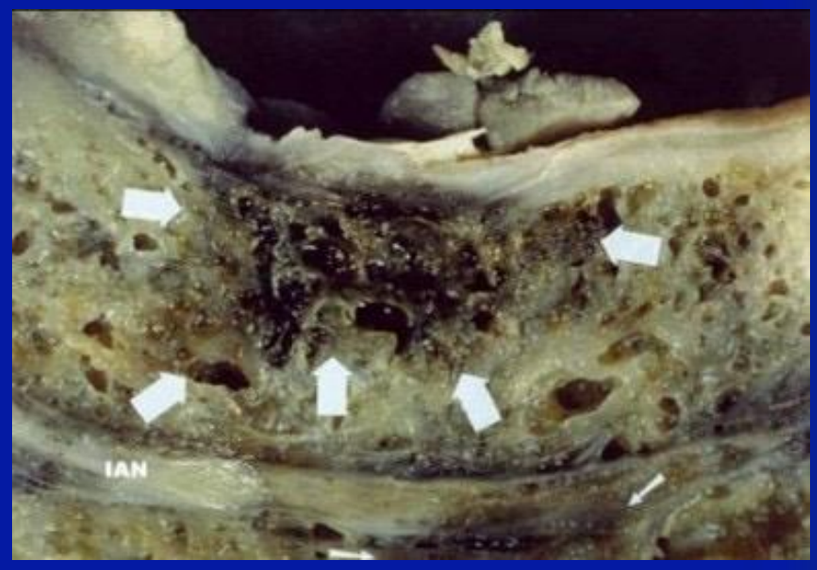
Initials	Age	Sex	Cancer (R/L)	Meridian of Cancer	Dental (RC, Crown, Filling)	Same meridian as cancer? Yes/No	Adjacent meridian
MA	59	F	Breast	SP/ST	#19 implant (LU/LI) Cavitation #16,17 (HT/SI, PC/TB)	N	Y
JA	71	F	Ovarian	SP/ST	#14 crown (SP/ST)	Y	
AB	76	M	Skin (left ear)		RC Unknown # #4,5 PC (LU/LI)		
DB	78	F	Skin (multiple)	SP/ST LU/LI	#3,20 PC (SP/ST) #19 PC (LU/LI) #30 GC (LU/LI)	Y	
GB	66	F	Acute Myeloid Leukemia (AML)	SP/ST	#14, 15, 19 RC (SP/ST) #4, 19 PC (LU/LI) #20 PC (SP/ST)	Y	
LB	53	F	Colon	LU/LI	#14 RC (SP/ST) #30 RC (LU/LI)	Y	
DB	56	M	Testicular	SP/ST	#9 RC (KI/BL) (previous)	N	N
RC	71	F	Skin	KI/BL	Full dentures	Need Cone Beam Scan	
CC	66	F	Breast (left)	SP/ST	(Phone consult) Gold Crown in SP/ST	Y	
MC	87	F	Breast, Uterine	SP/ST	#30 GC (LU/LI) #7 Amalgam (KI/BL)	N	Y
NC	55	F	Chronic Lymphocytic Leukemia (CLL)	SP/ST	#2 Amalgam (SP/ST)	Y	
JC	73	M	Prostate	SP/ST	#5 PC (LU/LI) #31 GC (LU/LI) #16 GC (PC/TB, HT/SI)	N	N
SC	59	F	Skin (multiple)	SP/ST KI/BL	(Phone consult) Impacted wisdom teeth	Need Cone Beam Scan	

Initials	Age	Sex	Cancer (R/L)	Meridian of Cancer	Dental (RC, Crown, Filling)	Same meridian as cancer? Yes/No	Adjacent meridian
CL	59	F	Breast	SP/ST	#14 Broken tooth (SP/ST) #15 Amalgam (SP/ST)	Y	
TM	73	M	Bladder, Thyroid	KI/BL, SP/ST	#8, 9 extracted (KI/BL) #20, 29 (SP/ST) #13 GC (LU/LI)	Y	
DM	66	F	Breast	SP/ST	#14 missing crown (SP/ST)	Y	
JM	71	F	Breast (right)	SP/ST	#2 GC (SP/ST) +2 PC's in SP/ST	Y	
RM	61	M	Melanoma (lung)	LU/LI	#31 RC (LU/LI)	Y	
JP	69	M	Prostate	SP/ST	#14, 15 Amalgams (SP/ST)	Y	
DP	75	M	Prostate	SP/ST	None identified; upper dentures	Need Cone Beam Scan	
JP	79	F	Breast	SP/ST	Infection in LU/LI	N	Y
RS	78	F	Skin	SP/ST	#29 RC (SP/ST) 6 infections in LU/LI	Y	
SS	63	M	Prostate	SP/ST	#14 RC (SP/ST) #2 Amalgam (SP/ST)	Y	
BV	70	M	Skin (multiple)	LU/LI	#18, 19, 30 RC (LU/LI) #3, 14, 15 Amalgams (SP/ST)	Y	
RW	72	M	Prostate	SP/ST	#29 PC (SP/ST)	Y	
ZW	82	M	Breast, Skin (tip of nose - SP/ST)	SP/ST	RC Unknown #	Need Cone Beam Scan	
MW	78	M	Prostate	SP/ST		Need Cone Beam Scan	
KZ	52	F	Basal Cell (R)		None Identified	N	

Initials	Age	Sex	Cancer (R/L)	Meridian of Cancer	Dental (RC, Crown, Filling)	Same meridian as cancer? Yes/No	Adjacent meridian
MD	78	F	Skin (squamous/ basal)	SP/ST LV/GB	#6 RC (LV/GB) #5 PC (LU/LI)	Y	
LE	45	F	Thyroid	SP/ST	#14, 15 PC (SP/ST) #30 PC (LU/LI)	Y	
DE	48	F	Cervical	SP/ST	#2,3 RC (SP/ ST) #4 RC (LU/LI)	Y	
PF	54	F	Breast	SP/ST	#13 Amalgam (LU/LI) #14, 15 Amalgam (SP/ ST) #19 Amalgam (LU/LI)	Y	
CF	62	F	Bladder	KI/BL	Phone Consult; No Dental Measured	Need Cone Beam Scan	
BF	69	F	Breast	SP/ST	#19 RC (LU/LI)	N	Y
AF	67	F	Breast	SP/ST	#2, 3 Amalgams (SP/ST)	Y	
GF	34	M	Testicular	SP/ST	No infections identified; wisdom teeth removed	N	Y
IG	76	F	Skin (multiple)		RC LU/LI; infected teeth LV/GB and LU/ LI; extraction in SP/ST	Y	
DG	58	F	Thyroid	SP/ST	#3 RC (SP/ST) #2 Amalgam (SP/ST) #15 PC (SP/ ST)	Y	
DH	68	M	Skin (multiple)	SP/ST	#15 GC (SP/ ST) #14 PC (SP/ ST)	Y	
JH	76	M	Skin (multiple)		#2, 14 GC (SP/ST) #17, 32 GC (PC/TB, HT/SI) #4, 31 PC (LU/ LI)	Y	
RL	59	M	Meningioma, Skin		RC LU/LI	Y	

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.



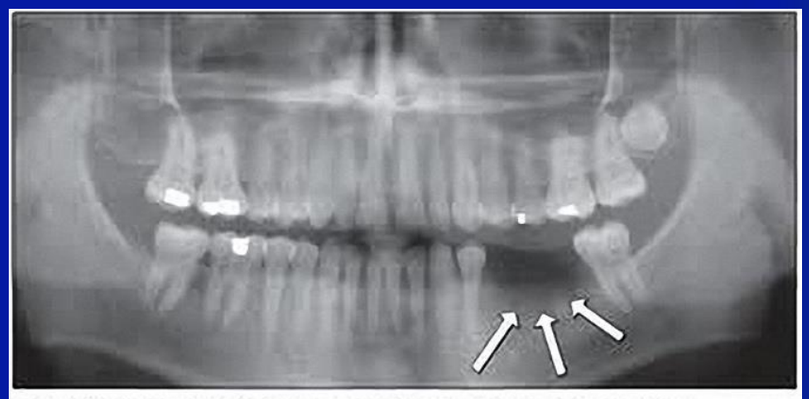
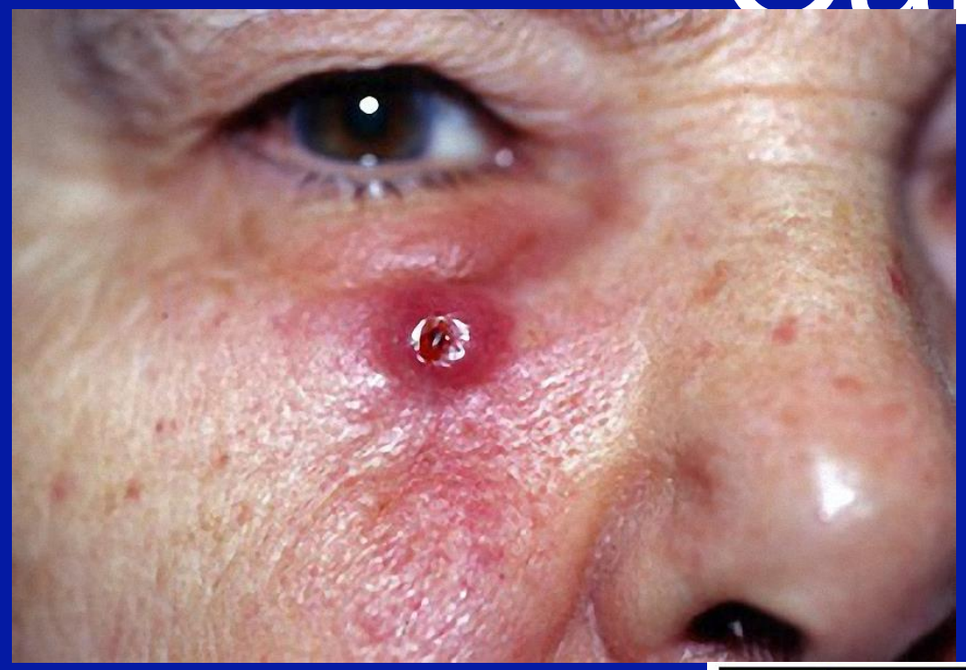
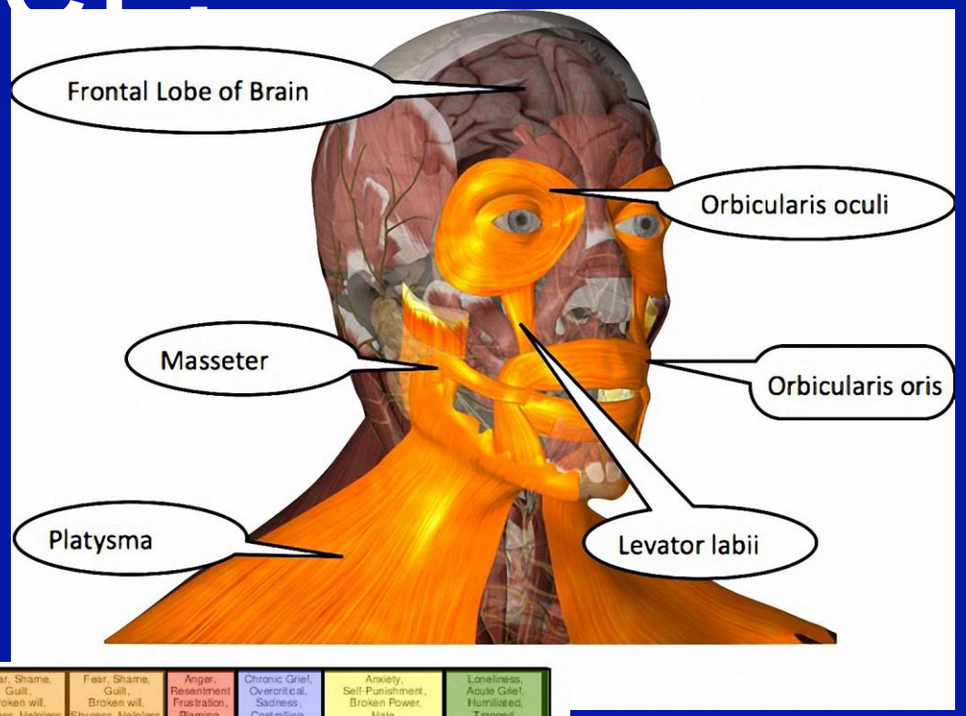


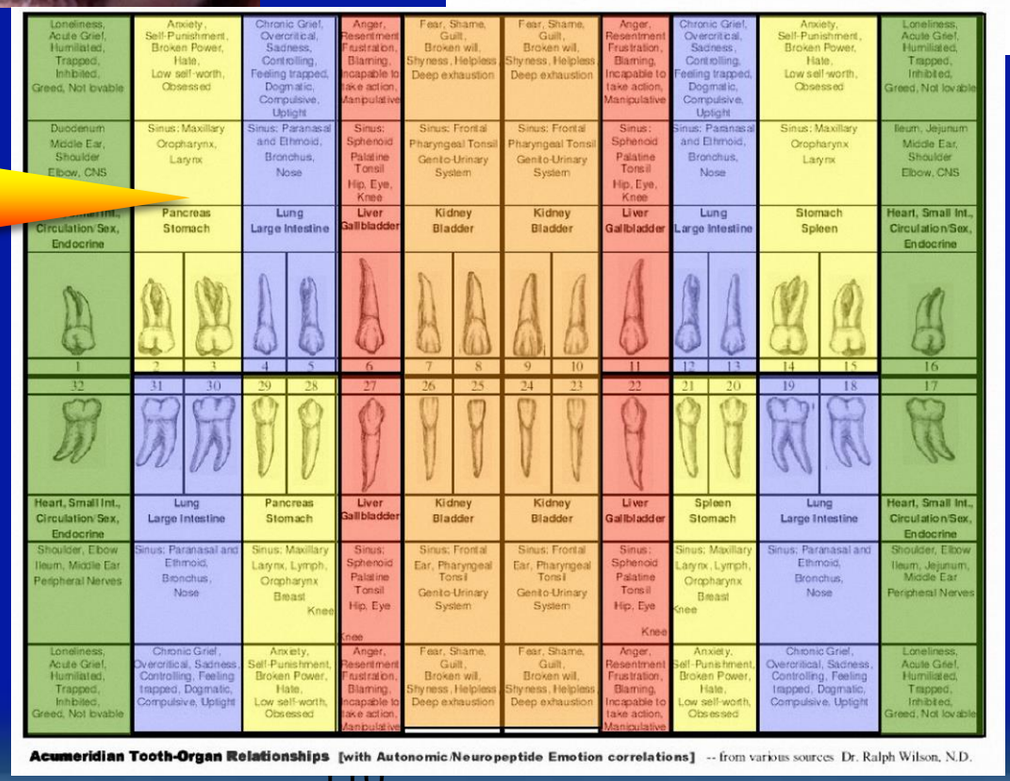
Fig. 6. Radiographic evidence of bony invasion of the mandible. Arrows outline lesion.

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 tho 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.