

The Pulse, the Electronic Age and Radiation: Early Detection

By Leon Hammer, MD and Ross Rosen LAc

Abstract

“Over the years, our population has been affected by a marked and rapid increase in toxicity from ordinary sources (environmental inhalant and contact toxins) and now from extra-ordinary sources (hydrocarbon based plastics). With the use of Contemporary Chinese Pulse Diagnosis we see the increased incidence of the Choppy quality—once rare and now common. Recently we have observed the sudden increase of another quality—Leather, associated with electro-magnetic radiation, also once rare and now common. This paper discusses the etiology (cell phones and wireless devices, iPods etc.), pathogenesis, diagnostic pulse signs, pathology and management (treatment) of this subtle yet pervasive toxin and especially the role of the pulse in the early detection of what we predict will be a “radiation epidemic.”

Recent articles and publications (*Chinese Pulse Diagnosis*, 2005⁵; *The Liver in Chinese Medicine*, 2008⁶) have detailed the effect of toxicity in our time. In essence, in the past 10-15 years there has been a marked increase in the pulse findings of a Choppy quality over the entire pulse, as well as more significant findings in the Left Middle Position associated with the Liver organ system as well as the lower portions of the organ depths reflecting retained pathogens.

The Choppy qualityⁱⁱⁱ has been traditionally viewed as a sign of blood stagnation. Having observed the enormous increase in the appearance of this quality on the pulse, Contemporary Chinese Pulse Diagnosis (CCPD) practitioners explored the possible relationship between blood stagnation (stasis) and toxicity with which it seemed associated. For example, it was found that “snake venom prothrombin activators induce blood clotting in its victims by specifically activating prothrombin to thrombin.”^{iv} Blood clotting is analogous to the phenomenon of blood stagnation (stasis) in Chinese medicine, which is an obvious threat to health and life when the blood stagnates to the point of insufficient blood circulation.

The pathogenesis of blood stagnation from these toxins (hydrocarbon derivatives) associated with the Choppy quality is the failure of the attempt by “metabolic” heat to eliminate the toxin, usually from the Liver. This heat accumulates and becomes “excess” heat in the Liver that is dangerous to that organ. The Liver normally eliminates heat through the bile into the Gallbladder. When this system

is overloaded the ‘excess’ heat is eliminated into the blood that it stores. This heat dries the vessel walls that gradually lose flexibility and coagulates the blood that slowly loses the yin component. The pulse sign of this loss of flexibility is the Ropy quality described below, while the Choppy quality is the one associated with the coagulated blood.

Of particular interest is the finding of the Choppy quality during the initial overall Uniform Impression that occurs while taking the pulse on both wrists simultaneously at the onset of the examination. The purpose is to get a sense of the qualities that are uniform over the entire pulse (all three positions on both sides) and on other large segments of the pulse, such as the Three Burners, and over each wrist. These qualities have special significance to the diagnosis and are interpreted differently than when the same qualities are found in only one position because they give us a picture of systemic rather than localized pathology.^v For example, Rough Vibration felt simultaneously with all six fingers indicates a previous shock to the Heart, whereas if found in any individual position it would mean tissue damage in the organ associated with that position.^{vi} Likewise, the Choppy quality felt initially with all six fingers indicates a systemic toxicity, whereas in other positions it might indicate localized toxicity, blood stagnation or micro bleeding (gastro-intestinal system).^{vii} In addition we are assessing a whole and universal picture of the person and his or her condition in terms of excess, deficiency, stability and capacity to function.^{viii}

Whereas the Choppy quality was once found rarely on the initial impression of the above-described Uniform Qualities, in the past fifteen years it has become a common quality in both positions. These findings indicate systemic toxicity and retained pathogens, also known as “residual pathogenic factors.”^{ix} If the retained factor is heat it is called Latent Heat^x or Lurking Heat.^{xi} We have observed this on the pulse increasingly since the first Gulf War and coincidentally with the Gulf War Syndrome, which a congressional research committee has now definitely linked to organophosphates. While exposure to toxins has been often documented since the beginning of the industrial revolution two hundred years ago, usually related to specific industries (welding) and inhalant solvents by artists, since WWII the proliferation of the use of oil-based hydrocarbons in the manufacture of plastics, pesticides, herbicides and fungicides has escalated by the thousands.^{xii}

It has been estimated that compared to sixty years ago there are between 50 and 170 new “substances” in our blood; these are mostly long chain hydrocarbons resulting from oil compounds and plastics.^{xiii} What may not be so easily measurable, however, is the effect of a toxin that is increasing faster than any other—namely, radiation.

Ronald B. Herberman, MD, of the University of Pittsburgh Cancer Institute, states on the UOP website and recently before the U.S. Congress that “An international expert panel of pathologists, oncologists, and public health specialists recently declared that electromagnetic fields emitted by cell phones should be considered a potential human health risk. To date, a number of countries including France, Germany, and India have issued recommendations that exposure to electromagnetic fields should be limited.” The Toronto Department of Public Health has stated this as well.^{xiv} Similar testimony to the U.S. Congress was submitted by Dr. David Carpenter of the University of Albany, NY, and by the World Health Organization’s International Agency for Research on Cancer. Electromagnetic radiation is produced not just from cell phones, but also from Bluetooth devices, computers, iPods, microwave ovens, wireless internets, and electric guitars and pianos at the very least, to say nothing of all the electric wires indoors and out that have been radiating the public for the last 100 years.^{xv}

In the groundbreaking “Bio-Initiative Report: A Rationale for a Biologically-based Public Exposure Standard for Electromagnetic Fields (ELF and RF),” Dr. David Carpenter and Cindy Sage reveal some of the hazards of electro-magnetic fields (EMF). These include childhood cancers, especially leukemia and brain cancers,^{xvi} adult cancers, including breast cancer,^{xvii} genetic damage (DNA), including Alzheimer’s,^{xviii} an effect on stress proteins,^{xix} damage to the immune system, and chronic inflammatory diseases^{xx} to name a few. In addition, the radiation of electromagnetic fields passes the blood brain barrier and alters the biochemistry of the brain,^{xxi} hence it will also affect the *shen* and one’s mental-emotional-psychological-behavioral state.^{xxii} Studies have shown that EMF from cell phones effect the electrical activity of the brain.^{xxiii}

This article proposes a new finding on the pulse that reflects the significant damage accrued from sustained and prolonged exposure to radiation—the Leather quality. CCPD practitioners have consistently found the Leather quality in people exposed to known

radiation, especially in patients who have undergone radiation as a cancer treatment. It is from the pulse findings from this population that we have extrapolated the association to the growing Leather qualities in the general population.

The Leather Quality

The Leather quality is a variation of the Tense quality with a very different interpretation. The term Leather is inherently confusing because there are three known variants that feel similar at the Qi Depth,^{xxiv} the most superficial part of the pulse below Floating (just under the skin),^{xxv} and vary considerably at other depths. They are the Leather quality described herein, the Leather-Empty^{xxvi} quality associated with a Qi Wild condition,^{xxvii} and the Leather-Hollow^{xxviii} quality associated with severe hemorrhage. The Leather quality (neither Hollow nor Empty) is a sign of extreme deficiency of *yin*, blood and, perhaps most importantly, essence.

Li Shi Zhen^{xxix} (1518-1593), one of the greatest physicians in Chinese history, places the Leather quality in the Floating category as more Wiry and Rapid than a Hollow pulse (Li Shi Zhen 13^{xxx}). He states: the Leather pulse occurs from cold and deficiency or when perverse *qi* moves internally; the Leather pulse results after severe damage to the *jing*-essence of men; in women, after severe blood loss (Li Shi Zhen 25^{xxxi}).

The distinguishing aspect of the Leather quality is its extreme hardness, especially at the Qi Depth, with the same relative width as the Tense quality, less width than the Taut quality, and greater than Tight.^{xxxii} The other depths are equally hard, whereas with the Leather-Empty the Blood and Organ depths are diminished and with the Leather-Hollow, the Blood Depth is absent.

An associated quality in the continuity of the hardening of the vessel walls is the Ropy quality. The Ropy^{xxxiii} quality (cord-like, big, hard, and round and distinct from the surrounding anatomical structures) is specifically a sign of chronic heat from excess or deficiency in the blood that has depleted the fluid (*yin* and blood) of the muscular walls of the vessels such that they have lost significant flexibility and elasticity. With regard to its sensation (hardness) and interpretation (depletion of *yin* and blood), the Ropy pulse is usually regarded as an indication of a widespread, general arteriosclerotic process and is sometimes accompanied by hypertension. It is distinguished here from the vessel hardening Leather quality by the source of the heat and by the consequential Chinese medical condition. The source of the loss of elasticity of vessel walls with the Ropy quality is excess heat from the attempt of the body to overcome stagnation and the consequence is

extreme *yin* and blood deficiency. The source of the loss of elasticity of vessel walls with the Leather quality is electromagnetic radiation and the consequence is extreme essence, as well as *yin* and blood deficiency.

The Leather quality has heretofore been a very rare pulse to encounter, and rightly so, as it reflects such extreme deficiency of *yin*, blood and especially *jing*-essence. As mentioned above, this pulse quality was initially observed in people who had received radiation therapy for cancer. What is very troubling to the authors is their observation, and recently that of other CCPD practitioners, of the rapid increase of this pulse quality in an ever-growing population of patients, especially the young. Clearly, what we are encountering with this new finding is the unique stresses on the body from an urbanized modernized life. The Leather quality in this context still reflects a severe *yin*-blood-essence deficiency, just a different etiology, but particularly insidious and ubiquitous.

The authors propose that the Leather quality will be the new “Choppy” in terms of its growing incidence reflecting the significant impact of our lifestyles and environment on our health. With such a profound deficiency, the Leather quality will also reflect another subset of the “Nervous System Weak”^{xxxiv},^{xxxv} condition wherein patients experience fluctuating symptoms, are highly vulnerable, or unstable, and easily disturbed or stressed, with a strong vulnerability to illness. In the past this has been called neurasthenia by the medical profession.

Other Factors Contributing to the Leather pulse quality

Though less relevant to our principal thesis relating the Leather quality to radiation, other lifestyle factors that we have written about—in particular, birthing issues, fertility, technology and exercise—deplete blood, *yin*, and essence. Birthing practices like cutting of the cord too soon where a lack of blood gets transferred to the baby^{xxxvi} or birth trauma (any insult to the fetus from conception to shortly after birth) is a shock to the heart with the rapid depletion of Heart *yin* creating “circulation out of control.”

Other conditions leading to a significant depletion of essence in particular, and both blood and *yin*, will manifest as a Leather quality on the pulse. They include the “Nervous System Tense”^{xxxvii} condition that creates Liver Qi stagnation and excess heat in the Liver. Since the Liver stores the blood, the heat enters the blood leading to ‘Heat in Blood’, and “Blood Thick”^{xxxviii} conditions, seriously depleting Kidney *Yin* and Essence, and a drying and hardening of the vessel walls. Additionally, depleted Kidney Essence in mothers giving birth later in life and EMF

exposure from technological “advancements” such as the overuse of sonograms in-utero deprives the fetus of quality essence. The exercise revolution wherein everyone is pushing themselves too hard and sweating excessively depletes *yin* and blood (the fluid of the heart), that must ultimately drain the kidney storehouse of *yin* and essence. The Leather quality has also been encountered by the authors and colleagues in patients with cocaine abuse.

Clinical Considerations

Recently the Leather pulse quality is being measured in large segments of the population. What follows is but a small sampling. Two and a half years ago a pervasive Leather quality was found in a thirty-two year old female with ADD, learning disabilities, and arthritis. The Ropy quality was also present as was “Blood Thick” and “Nervous System Weak.” It was at this point that the Leather quality was still a rare occurrence and hence sparked the present inquiry into the nature of Leather as distinct from the classical etiologies. One current patient, 43, suffering from thyroid imbalance and a systemic inflammatory skin disease of unknown biomedical origin presents with a Leather pulse as well as Ropy and “blood thick.”

In another group of patients, ranging in age from twenty-one to thirty-five, all had the Leather quality except the thirty-five year old person. In yet another group ranging from ages fifty-four to seventy-three there were no Leather qualities. In the younger group, one, aged twenty-seven, had a mild Ropy quality (drying of the intima of blood vessels) which over the past two years has been observed to occur with the Leather quality more often in people slightly older in this generally very young group. Two patients who sleep on mattresses with infrared radiation devices, one thirty-three and the other sixty-seven, had the Leather quality, and only the older patient had a Ropy quality. Years ago the pulse was taken on a young man of about twenty-four whose entire pulse was Leather to an extraordinary degree. At the time there was no explanation, but recently Dr. Hammer recalled that this man worked in Silicon Valley where his exposure to radiation may be comparable to what is occurring increasingly today in the general population.

What is increasingly clear is that the consequences of the extraordinary increases in exposure to radiation due to the exponential increase in all of sources mentioned above as well as supportive devices such as towers and power lines is beginning to manifest signs of deficiencies in *yin* (fluids), blood, and essence (the stored energy and substance of the body) and increases in toxic heat in the vessels as manifested in the pulse qualities Leather

continued on page 34

and Ropy described above. The result is an acceleration of the drying and destruction of tissues in people similar, as mentioned above, to that observed in people with radiation treatment for cancer. Furthermore, in young people we and our colleagues are encountering pulse qualities (Ropy, Leather, Robust Pounding, Slippery and Choppy) associated with the arteriosclerotic process, previously not ordinarily encountered until late middle and old age.

Radiation-induced pathogenic heat presents unique challenges to a remarkably adaptive human organism. Excess heat is balanced by the mobilization of fluid (*yin*) or carried from tissue (solid and hollow organs) to the endlessly circulating blood and through the network of divergent and muscle-sinew channels to the joints, orifices, body cavities, fascia, muscles, ligaments and tendons. Radiation creates the excess heat while also drying the balancing fluid (*yin*) as well as reducing the formation of blood (due to the depleted essence that sustains the bone marrow which produces it). The body has no defense against this pathogen, and the most immediate serious consequence is cell mutation and ultimately neo-plastic activity (tumors and cancer).

Conclusion

It is our aim to alert the Chinese medical profession and practitioners of this burgeoning serious medical and public health problem involving modern technology and specifically radiation. Our findings indicate that radiation sickness (a form of damage to organ tissue due to excessive exposure to ionizing radiation) will become endemic in an undetermined period of time with its concomitant destruction of the immune system and with the rampant disease that follows.

We offer a method of early detection and monitoring and are reporting our diagnostic findings in order to mobilize awareness and, hopefully, action. We have postponed issues of prognostication, clinical progression, changes in symptoms, and signs (the pulse) in the service of consciousness.

While environmental issues (legal control of radiating devices) are obviously beyond the scope of this paper, Chinese medical interventions are within our scope of practice. We can offer management-treatment options that have worked to diminish the effects of medical radiation for cancer and offer the suggestion that the reader search the Internet for sources of information about devices that claim to neutralize radiation and for sources of radiation not mentioned above such as cell phones and mattress radiation devices. As always this management must be tailored to

the individual based upon the uniqueness of each patient.

Proposed Management Options:

In addressing radiation toxicity presenting with a Leather pulse quality there are five main management principles. They are:

1. Eliminate radiation toxicity
2. Nourish *yin*
3. Nourish blood
4. Nourish *jing*-essence
5. Remove heat (from the blood and tissues)

Acupuncture

Applying acupuncture therapy there are a host of options, the main ones utilizing the 8 extraordinary meridians which deal with *yin* and blood and reducing toxicity, as well as the Primary meridians which deal with the same functions. None of the treatment options listed below are deemed exclusive. They are as follows:

1. Ren Mai
2. Yin Qiao
3. Chong Mai (especially for *jing*-essence)
4. Dai Mai (to rid the body of radiation)
5. Kidney channel
6. Spleen channel
7. Liver channel

Drawing from the foregoing meridians as well as points from other channels known to accomplish our management principles, one could utilize the following points as part of a more complete treatment strategy:

1. Toxicity: LI 16, KI 9, GB 36
2. LU 9 for influence on vessels
3. *Yin*-Essence Deficiency and blood cooling
 - a. CV- 2, 4, 6, 8, 12, 17
 - b. CV-15: source point of all *Yin* organs
 - c. SP-6 [*Yin* and Blood],
 - d. SP- 12: Where Blood enters Chong Mai
 - e. ST- 30 : crossing point of Chong, Du and Ren Mai; where *Qi* enters Chong Mai; tonifies Kidney [Liver] Essence
 - f. ST- 33: tonifies acute *Yin* deficiency
 - g. ST 42: builds fluids
 - h. KI- 2 : cools blood, *Yin* Qiao
 - i. KI 22, 23, 24, 25, 26, 27
 - j. KI 3, 7, 9, 10, 15, 16
 - k. KI- 6: calms *Shen* by nourishing *Yin*-Essence
 - l. LV 3, 8: build *Yin* and blood
 - m. LU 5: Lung *Yin* deficiency
 - n. HT 6: Heart *Yin* deficiency
 - o. BL-11: Sea of Blood & *Jing* (strengthens bones)
 - p. GV-12: [Body Pillar]
 - q. BL-23: nourishes *Yin*, Blood & Essence
 - r. BL-43: nourishes Essence
 - s. BL-31 through 34: tonify Kidney Essence

- t. ST- 25: supports Kidney Yuan *Qi*
- u. SP- 10 Moxa:cools blood
- v. ST- 32: removes heat and nourishes essence

Herbal Medicine

From an herbal perspective we list the following suggestions, none of which are exclusive and all of which should be tailored for individual needs:

1). *Jing* and *Yin*-Blood

- a. Liu Wei Di Huang Tang and variations
- b. Yi Guan Jian
- c. Zuo Gui *Yin* and Wan
- d. Jin Suo Gu *Jing* Wan
- e. Qing Hao Bie Jia Tang
- f. San Jia Fu Mai Tang
- g. Da Bu*Yin* Wan

2) Radiation

a. Moisten Lungs

Amer. Ginseng	Xi Yang Shen	15 gm
Gypsum	Shi Gao	6gm
Ophiopogon	Mai Men Dong	15 gm
Asparagus	Tian Men Dong	15 gm
Glehnia	Sha Shen	15 gm
Scrophularia	Xuan Shen	15gm
Rehmania	Sheng Di Huang	15gm
Imperata	Bai Mao Gen	15 gm
Polygonati Odorati	Yu Zhu	15gm
Lonicerea	Jin <i>Yin</i> Hua	15gm
Anemarrhanea	Zhi Mu	9gm
Oldenlandia	Bai Hua	
	She She Cao	30gm
Taraxci	Pu Gong <i>Ying</i>	15gm
Poria Cocos	Fu Shen	24gm
Atractylodes	Bai Zhu	9gm
Licorice	Gan Cao	6 gm
Salvia	Dan Shen	9 gm
Trichosanthis	Tian Hua Fen	15 gm
Corrii Asini	E jiao	9 gm

b. General for Radiation

Ophiopogon	Mai Men Dong	24gm
Asparagus	Tian Men Dong	24gm
Glehnia	Sha Shen	20gm
Scrophularia	Xuan Shen	8gm
Rehmania	Shu Di Huang	20gm
Imperata	Bai Mao Gen	20gm
Polygonati Odorati	Yu Zhu	18gm
Lonicerea	Jin <i>Yin</i> Hua	18gm
Anemarrhanea	Zhi Mu	20gm
Oldenlandia	Bai Hua She Cao	60gm
Taraxci	Pu gon <i>Ying</i>	40gm
Codonopsis	Dang Shen	24gm
Poria Cocus	Fu Shen	24 gm
Atractylode	Bai Zhu	20gm
Licorice	Gan Cao	6gm
Salvia	Dan Shen	30gm
Trichosanthis	Gua Lou	24gm

- 3). Blood Heat
- a. Dang Quei & Gardenia [Wen Ching Yin+ Ganoderma]
- b. Tang-kuei Dang gui 4.0gm
 Rehmannia Di huang 4.0gm
 Peony Shao yao 3.0gm
 Cnidium Chuan xiong 3.0gm
 Coptis Huang lian 1.5gm
 Scute Huang qin 3.0gm
 Phellodendron Huang bo 1.5gm
 Gardenia Zhi zi 2.0gm
 Gandoderma Ling Zi 1.5-9gm

Other Treatments

1). Essential Oils :

- a. Cajeput
- b. Jasmine
- c. Rose
- d. Carrot Seed
- e. Celery Seed
- f. Vetiver
- g. Geranium

2). Gems

a. Black Tourmaline: Tourmaline would be soaked in a glass of mineral water or sea salt to draw out contaminants. Soak for one day then discard. Then soak the tourmaline in spring water for ½ day. Drink it 3 days on 3 days off to affect *yuan/jing* level.

3). Other

a. Sea Salt baths to draw out radiation from *jing* level.

References

i Hammer, Leon I, *Chinese pulse diagnosis, a contemporary approach*, rev. ed., Eastland Press, 2005

ii Personal Communication

iii Hammer, Leon I, *Chinese pulse diagnosis, a contemporary approach*, rev. ed., Eastland Press, 2005, p 362

iv Prof. R Manjunatha Kini; *Snake venom prothrombin activators similar to blood coagulant factors*; National University of Singapore (faculty of Science), Singapore; August 22, 2008

v Hammer, Leon I, *Chinese pulse diagnosis, a contemporary approach*, rev. ed., Eastland Press, 2005, ch 13, 14

vi Ibid. p 370

vii Ibid. p 362

viii Ibid. pp. 463-464

ix Maciocia, G; *The practice of Chinese medicine*; Churchill Livingstone, 1994; p. 632

x *The yellow emperor's classic of internal medicine*; Simple Questions; People's Health Publishing House; 1979

xi Guohui Liu, *Warm pathogen diseases*, Eastland Press

xii Dr. Ana Soto; Tufts E-News; *Are environmental toxins causing breast cancer?*

xiii *Science News*, February 22, 2003. vol.163

xiv Statement of Ronald B. Haberman, MD, director, University of Pittsburg Cancer Institute and UPMC Cancer Centers; Domestic Policy Subcommittee Oversight and Government Reform Committee, Thursday, September 25, 2008 p 7

xv Ibid. p 3

continued on page 39

Management Principle	Acupuncture	Herbal Medicine/Other
1. Eliminate radiation toxicity	8 Extras: a. Ren Mai b. Yin Qiao c. Chong Mai (especially for Essence) d. Dai Mai (to rid body of radiation)	Traditional Formulas: 1). <i>Jing</i> and <i>Yin</i> -Blood a. Liu Wei Di Huang Tang and variations b. Yi Guan Jian c. Zuo Gui Yin and Wan d. Jin Suo Gu Jing Wan e. Qing Hao Bie Jia Tang f. San Jia Fu Mai Tang g. Da BuYin Wan
2. Nourish Yin		
3. Nourish Blood		
4. Nourish <i>Jing</i>	Primary Channels: a. Kidneys b. Spleen c. Liver	2) Radiation i. Moisten Lungs Amer. Ginseng Xi Yang Shen 15 gm Gypsum Shi Gao 6gm Ophiopogon Mai Men Dong 15 gm Asparagus Tian Men Dong 15 gm Glehnia Sha Shen 15 gm Scrophularia Xuan Shen 15gm Rehmania Sheng Di Huang 15gm Imperata Bai Mao Gen 15 gm Polygonati Odorati Yu Zhu 15gm Lonicera Jin Yin Hua 15gm Anemarrhanea Zhi Mu 9gm Oldenlandia Bai Hua She She Cao 30gm Taraxci Pu Gong Ying 15gm Poria Cocos Fu Shen 24gm Atractylodes Bai Zhu 9gm Licorice Gan Cao 6 gm Salvia Dan Shen 9 gm Trichosanthis Tian Hua Fen 15 gm Corrii Asini E jiao 9 gm
5. Remove Heat (from Blood and Tissues)	Specific Acupuncture Points: a. Toxicity: LI 16, KI 9, GB 36 b. LU 9 for influence on vessels c. <i>Yin</i> -Essence Deficiency i. CV- 2, 4, 6, 8, 12, 17 ii. CV-15: source point of all <i>Yin</i> organs iii. SP-6 [<i>Yin</i> and Blood], iv. SP- 12: Where Blood enters Chong Mai v. ST- 30 : crossing point of Chong, Du and Ren Mai; where Qi enters Chong Mai; tonifies Kidney [Liver] Essence vi. ST- 33: tonifies acute <i>Yin</i> deficiency vii. ST 42: builds fluids viii. KI- 2 : cools blood, <i>Yin</i> Qiao ix. KI 22, 23, 24, 25, 26, 27 x. KI 3, 7, 9, 10, 15, 16 xi. KI- 6: calms Shen by nourishing <i>Yin</i> -Essence xii. LV 3, 8: build <i>yin</i> and blood xiii. LU 5: Lung <i>Yin</i> deficiency xiv. HT 6: Heart <i>Yin</i> deficiency xv. BL-11: Sea of Blood & <i>Jing</i> (strengthens bones) xvi. GV-12: [Body Pillar] xvii. BL-23: nourishes <i>Yin</i> , Blood & Essence xviii. BL-43: nourishes Essence xix. BL-31-34: tonify Kidney Essence xx. ST- 25: supports Kidney Yuan Qi xxi. SP- 10 Moxa- cools blood xxii. ST- 32 removes heat and nourishes essence	ii. General for Radiation Ophiopogon Mai Men Dong 24gm Asparagus Tian Men Dong 24gm Glehnia Sha Shen 20gm Scrophularia Xuan Shen 8gm Rehmania Shu Di Huang 20gm Imperata Bai Mao Gen 20gm Polygonati Odorati Yu Zhu 18gm Lonicera Jin Yin Hua 18gm Anemarrhanea Zhi Mu 20gm Oldenlandia Bai Hua She Cao 60gm Taraxci Pu gon Ying 40gm Codonopsis Dang Shen 24gm Poria Cocus Fu Shen 24 gm Atractylode Bai Zhu 20gm Licorice Gan Cao 6gm Salvia Dan Shen 30gm Trichosanthis Gua Lou 24gm
		3). Blood Heat Dang Quei & Gardenia [Wen Ching Yin+ Ganoderma or Tang-kuei Dang gui 4.0 Rehmannia Di huang 4.0 Peony Shao yao 3.0 Cnidium Chuan xiong 3.0 Coptis Huang lian 1.5 Scute Huang qin 3.0 Phellodendron Huang bo 1.5 Gardenia Zhi zi 2.0 Gandoderma Ling Zi 1.59gm
		4). Essential Oils ^{xvi} a. Cajeput ^{xvii} b. Jasmine c. Rose d. Carrot Seed e. Celery Seed f. Vetiver g. Geranium
		5). Gems a. Black Tourmaline Tourmaline would be soaked in a glass of mineral water or sea salt to draw out contaminants. Soak for one day then discard. Then soak the tourmaline in spring water for ½ day. Drink it 3 days on 3 days off to affect <i>yuan/jing</i> level. ^{xix}
		6). Other a. Sea Salt baths to draw out radiation from <i>jing</i> level. ¹

xvi BioInitiative Report, P. 14; Carpenter, David, MD; Sage, Cindy, *Setting prudent public health policy for electromagnetic field exposures*, *Reviews on Environmental Health*, vol. 23, no. 2, 2008 p 94,100

xvii Ibid. p 16

xviii Ibid. p 18, 22; Setting prudent public health policy for electromagnetic field exposures, p 103

xix Ibid. p 22

xx Ibid, p 23

xxi Carpenter, David, MD; Sage, Cindy, Setting prudent public health policy for electromagnetic field exposures, *Reviews on Environmental Health*, vol. 23, no. 2, 2008, p 103; Carpenter, David, MD; Sage, Cindy, *BioInitiative Report: A rationale for a biologically-based public exposure standard for electromagnetic fields (ELF and RF)*, www.bioinitiative.org, 2007 p252

xxii Ibid. p 275

xxiii Carpenter, David, MD; Sage, Cindy, *BioInitiative Report: A rationale for a biologically-based public exposure standard for electromagnetic fields (ELF and RF)*, www.bioinitiative.org, 2007, p19

xxiv Hammer, Leon I, *Chinese pulse diagnosis, a contemporary approach*, rev. ed., Eastland Press, 2005, p 62, 235

xxiv Ibid. p239

xxv Ibid. p 255

xxvi Ibid. p 262, 292

xxvii Hammer, Leon I, The unified theory of chronic disease with regard to the separation of yin and yang and "The Qi is Wild"; *Oriental Medical Journal*, vol. 6, no 2&3, 1998

xxviii Hammer, Leon I, *Chinese pulse diagnosis, a contemporary approach*, rev. ed., Eastland Press, 2005. pp. 292-3

xxix Li Shi Zhen; *The pulse studies of Bin Hu*; translated by Ho Ku Huynh; Paradigm Publications, 1981, Brookline, MA

xxx Li Shi Zhen, *Pulse diagnosis*, Paradigm Publications, 1985 p 13

xxxi Ibid. p 25

xxxii Ibid. figure 11-2 p 328

xxxiii Ibid. p 360

xxxiv Hammer, Leon I, *Dragon rises, red bird flies*, rev. ed.; Eastland Press, p 310

xxxv Hammer, Leon I, *Chinese pulse diagnosis, a contemporary approach*, rev. ed., Eastland Press, 2005, p 576, 738d

xxxvi BMJ-British Medical Journal (2007, August 17). Umbilical Cord Clamping Should Be Delayed, Says Expert. *Science Daily*. retrieved; Cutting the Cord Too Soon, *Time*, Morley, George M., Premature Clamping of the Umbilical Cord may Result in Brain Damage to Newborns, Mercola.com, 2003. *Time*, April 19, 1963; Small delay after birth when cutting umbilical cord of a premature baby appears to lessen chances of bleeding, News-Medical.net, Oct. 18, 2004

xxxvii Hammer, Leon I, *Dragon rises, red bird flies*, Eastland Press, ch 14, p 312

xxxviii Hammer, Leon I, *Chinese pulse diagnosis: a contemporary approach*, rev. ed., Eastland Press 2005. p 480, 571d

xxxix Ibid. p168

xl These are findings and correlations that we make from our collective experiences with CCPD, Contemporary Oriental Medicine® and history taking of lifestyle and other factors. We have written about this previously.

xli Wikipedia

xlii There are many devices advertised for sale on the internet including but not limited to: Q-Link (www.q-linkproducts.com), cell phone and appliance diodes (<http://energypolarit.com>), Yarrow Environmental Solutions herbal formulation (<http://www.fesflowers.com/yarrow-formula.htm#herbs>), Comfortstone Jade Infrared Mattresses, and others.

xliii Yuen, Jeffrey C., *Materia Medica of Essential Oils (Based on a Chinese Medical Perspective)*, 2002.

xliv Ibid. (Add 20 drops to bath water)

xlvi Yuen, Jeffrey C., *Lecture: Cancer and Chinese Medicine*

xlvi Ibid.

xlvii Yuen, Jeffrey C., *Materia Medica of Essential Oils (Based on a Chinese Medical Perspective)*, 2002.

xlviii Ibid. (Add 20 drops to bath water)

xlvi Yuen, Jeffrey C., *Lecture: Cancer and Chinese Medicine*

l Ibid.

Dr. Leon Hammer is a medical doctor, psychiatrist, and psychoanalyst who has studied, practiced, and taught Oriental medicine for 38 years. He is currently chairman of the Governing Board of Dragon Rises College of Oriental Medicine where he teaches and writes. He is the author of many articles to be found at www.dragonrises.edu and of *Dragon Rises Red Bird Flies, Chinese Pulse Diagnosis: A Contemporary Approach* (Eastland Press) and *The Patient-Practitioner Relationship in Chinese Medicine (Thieme)*. For further information please contact www.dragonrises.edu or www.dragonrises.org

Ross Rosen is the founder and clinic director of the Center for Acupuncture and Herbal Medicine in Westfield, NJ. He graduated from the Pacific College of Oriental Medicine in NY (2000) with a master's of science in traditional Oriental medicine and is certified by the NCCAOM (DiplOM). Ross has trained closely with Dr. Leon Hammer since 2001 and is one of only a few practitioners to be certified directly by him in Contemporary Chinese Pulse Diagnosis and Contemporary Oriental Medicine®. Ross is currently working on his PhD in classical Chinese medicine at the American University of Complementary Medicine with Jeffrey Yuen as well as authoring numerous articles on CCPD and COM®.