Restoring Balance After Cancer Treatment

Christine Horner, MD FACS

Cancer

- 41% of Americans
- 23% of all deaths
- All invasive cancer sites ACS 2007
- Total 11,714,000
- Males 5,353,000
- Females 6,361,000
- 200 different diseases

It is more important to know what sort of person has a disease than to know what sort of disease a person has.

Hippocrates (460-377 B.C.)
AVERT THE DANGERS NOT YET COME

- Cancer: catastrophic consequence of life out of balance
- Learn through illness
- Choice point: Live or die
- Best outcomes integrative approach
- 2/3 of cancer patients use CAM
- Motivation

GET THE RIGHT TREATMENT

- Patient Advocates
  - Ken Schueler
    - HKS Patient Advocates
    - 212-725-9900, Fax 212-725-9902
    - 49 Park Ave, Ste. 10, New York, NY 10016
    - Ken@HKSchueler.com
  - Gwen Stritter, MD
    - 650-851-6377, Fax 650-851-6343
    - www.strittermed.org
    - 1235 Los Trancos Rd., Portola Valley, CA 94028
  - Mark Renneker, MD
    - 415-461-6363

USE INTEGRATIVE CARE

- Reduces suffering, enhances tx, improves outcome
- The Block Center, Keith Block, MD Chicago
- Mitch Gaynor, MD NYC
- Cancer Treatment Centers of America
- Burzynski Clinic, Houston
- Clinics in Germany and Tijuana
- Nutritionists: Jeanne Wallace PhD

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Western Treatments
- Surgery
- Chemotherapy
- Radiation
- Enhance the effectiveness while protecting against the damaging effects

Protecting Against Organ Damage
- Heart: CoQ10, L-carnitine, melatonin, glutamine
- GI: ginger, homeopathics, glutamine, probiotics, prebiotics (lignans), honey, aloe vera
- Nervous system: glutamine, L-carnitine, CoQ10, magnesium, IV glutathione, Brahmil, alpha lipoic acid
- Bone marrow: unrefined cloudy sesame oil
- Liver: milk thistle, turmeric, rosemary
- Immune system: Ashwagandha, astragalus, mushrooms, ginseng
- Radiation: sea buckthorn oil, holy basil, genistein, quercetin, ashwagandha
- Amrit Kalash

Amrit Kalash

OBJECTIVES: Maharishi herbal food supplements have been shown to inhibit the growth of mammary tumors and reduce free radical-mediated injuries. The purpose of this investigation is to evaluate the effects of aqueous and alcoholic extracts of Amrit Nectar tablets on rat liver microsomal lipid peroxidation compared to other antioxidants. The protective effect of dietary M7 (containing 38 herbs) on cisplatin-induced changes in glutathione (GSH) and glutathione-S-transferase (GST) activity in rat liver and kidney, and Adriamycin-induced mortalities in mice were also investigated.

RESULTS: Both aqueous and alcoholic extracts of MARES were more potent than other antioxidants tested under our experimental conditions. Adriamycin (15 mg/kg, intraperitoneally) caused 60% mortality during the period of 4 weeks in CDF1 mice. Dietary M7 (0.7%) treatment decreased the mortality to 20%. Dietary M7 (0.7%) supplementation with cisplatin treatment reversed the effects of cisplatin on liver and kidney GSH and GST activity.

CONCLUSIONS: These results indicate that M7 is a powerful antioxidant. M7 supplementation with Adriamycin and cisplatin treatment may protect against their toxicities.
**Amrit Kalash**

- Antioxidant Adjuvant Therapy Using Natural Herbal Mixtures (MAK-4 and MAK-5) During Intensive Chemotherapy: Reduction in Toxicity. A Prospective Study of 62 Patients
- **Summary**
  - The role of chemotherapeutic agents in the treatment of cancer is hampered and complicated by toxic side effects characteristic of these agents. Many of these agents produce cancer cells for generation; these radicals are unstable molecules which can cause cell damage and are responsible for many of the side effects of chemotherapy. The objectives of the present study were to evaluate the free radicals and their metabolites in breast cancer patients treated with intensive chemotherapy, and to investigate the free radical content of the blood, the breast tissue, and the tumor tissue. The research was conducted on 62 patients undergoing intensive chemotherapy. The patients had various types of cancer, including non-Hodgkin's lymphoma, breast, colon, and stomach cancer. The patients were receiving combination chemotherapy; the chemotherapeutic agents included cyclophosphamide, vincristine, methotrexate, doxorubicin, prednisolone, vincristine, Adriamycin, and piperazine. In the patients who received MAK-4 and MAK-5, along with their chemotherapy, there was reduced hematotoxicity, leukopenia, and thrombocytopenia. The patients undergoing MAK-4 and MAK-5 had significant reductions in tumor size. The use of chemotherapeutic agents in the treatment of cancer is hampered and complicated by toxic side effects characteristic of these agents. Many of these agents produce cancer cells for generation; these radicals are unstable molecules which can cause cell damage and are responsible for many of the side effects of chemotherapy. The objectives of the present study were to evaluate the free radicals and their metabolites in breast cancer patients treated with intensive chemotherapy, and to investigate the free radical content of the blood, the breast tissue, and the tumor tissue. The research was conducted on 62 patients undergoing intensive chemotherapy. The patients had various types of cancer, including non-Hodgkin's lymphoma, breast, colon, and stomach cancer. The patients were receiving combination chemotherapy; the chemotherapeutic agents included cyclophosphamide, vincristine, methotrexate, doxorubicin, prednisolone, vincristine, Adriamycin, and piperazine. In the patients who received MAK-4 and MAK-5, along with their chemotherapy, there was reduced hematotoxicity, leukopenia, and thrombocytopenia. The patients undergoing MAK-4 and MAK-5 had significant reductions in tumor size.

**Enhancing Effectiveness**

- **Chemo:** Amrit, green tea, turmeric, melatonin, omega-3 fatty acids
- **Whole body hyperthermia**
- **Radiation:**
  - Holy basil
  - Resveratrol
  - Turmeric
  - Genistein and quercetin Breast cancer
  - Ashwagandha, fatigue
The effects of theanine, as a novel biochemical modulator, on the antitumor activity of adriamycin.

Sadzuka Y, Sugiyama T, Miyagishima A, Nozawa Y, Hirota S.
School of Pharmaceutical Sciences, University of Shizuoka, Japan.

We studied the effects of theanine, a component of green tea leaves, on the antitumor activity of adriamycin (ADR) from the biochemical modulation viewpoint. Theanine inhibited the ADR efflux from Ehrlich ascites carcinoma cells and maintained the ADR concentration in tumor cells. Theanine enhanced the inhibitory effect of ADR on tumor growth by 2.1-fold in vivo, and increased 2.9-fold the ADR concentration in the tumor, compared to the ADR alone group. An increase in ADR concentration was not observed in normal tissues, such as the heart and liver. Theanine did not enhance, rather tended to normalize the increase of lipid peroxide level and reduction of glutathione peroxidase activity as indicators of the ADR-induced side toxicity.

PMID: 8975445 [PubMed - indexed for MEDLINE]

**ANTIOXIDANTS**

- Very different heterogeneous groups
- Activate genes for detoxification
- Phase 2
- Decreases DNA oxidation
- Stimulates DNA repair
- Apoptosis
- JNCI review: no adverse effects

**FOLLOWING THE LAWS OF NATURE**

- Enhances the flow of consciousness
- Enlivens inner healing intelligence
- Violating the laws of nature—obstructs the inner healing intelligence
- Everything effects us
- What to favor and what to avoid
THE TREE OF LIFE

- Tips of branches – ologists
- On the furthest tip of specialization—we know a lot about nothing
- Roots: we know a little about a lot
- Quantum level—practically nothing about everything

Ancient Wisdom

- “Let food be your medicine, and medicine be your food.”
  
  Hippocrates

- “Without proper diet no medicine will work— with proper diet no medicine is necessary.”
  
  Ayurveda

- “He that takes medicine and neglects diet wastes the skill of the physician.”
  
  Traditional Chinese Medicine

WHAT TO AVOID

- The Standard American Diet
WHAT TO AVOID

- Red Meat
- Carcinogenic
- HCA
- Saturated animal fats
- High iron: found in plaques, neuro, metabolic and cardiovascular heart disease x 2, colon polyps x 5, Cancer esophagus, colon and bladder hydroxyl radicals damage and inflammation

RED MEAT

- 5 oz/day Colon Cancer 250% (Harvard)
- 1.5 servings doubles breast cancer (Harvard)
- 70% higher pancreatic cancer (2005 JNCI)
- 50% bladder cancer 5x higher if a lot (12 yr prospective study)
- Diabetes type 2
- Obesity
- Cardiovascular
- 4 oz. 30% more likely to die in 10 years f/u
  - 543,653 subjects Arch Int Med

BAD FATS

- Saturated animal fats, transfats
- Storehouse of toxins
- Insulin resistance
- Inflammation
- Oxygen free radicals
**SUGAR**
- Universal mechanism for chronic disease (2008 A J Clin Nutri)
- Inflammation
- Immune system knockout
- Type 2 diabetes
- Obesity
- Metabolic syndrome: abdominal obesity, insulin resistance, high lipids, HTN
- Cancer: breast, colon, pancreas, uterus
- Depression
- Alzheimer’s
- Premature aging, wrinkles

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**OBESITY**
- ↑ inflammatory markers
- Type 2 diabetes
- HTN
- Heart disease
- Gall bladder
- Cancer
- Dementia
- Osteoporosis
- Macular degeneration

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**LIFESTYLE**
- Stress
- Poor Sleep
- Inactivity
- Pharmaceutical Drugs
- Environmental Toxins
- EMFs
WHAT TO FAVOR

- Plants
- Lower risk of death of all causes
- Reduces inflammation, ROS
- Delays cardiovascular disease
- Diabetes
- Dementia
- Cancers: mouth, pharynx, larynx, esophagus, stomach, colon, rectum, bladder, cervix, lung, breast, prostate, pancreas
- 1 cup vegetable soup lung cancer 4x longer life

PHYTOCHEMICAL

- Inhibits cyclin-dependent kinase-2: a key enzyme needed for BC growth
- Down regulates estrogen receptor (Garcia, J Biol Chem 2005)
- ER antagonist like tamoxifen
- Creates more “good” (2-OH) estrogen, and less “bad” (16-OH) (Brignall, Alt Med Rev. 2001)
- Prevents tumors from spreading and invading
- Apoptotic cell death BC cells

INDOLE-3 CARBINOL (DIM)
CRUCIFEROUS VEGETABLES

- Broccoli
- Bitter cress
- Bok choy
- Brussels sprouts
- Cauliflower
- Cabbage
- Collards
- Horseradish
- Kale
- Radishes
- Rutabaga
- Turnip
- Watercress
FRUIT
- Vit C, E, riboflavin, niacin, folate, iron, magnesium, manganese and potassium
- Proanthocyanidins
- Elegiac acid anticancer properties especially breast, pancreas, prostate and neuroblastoma, improves killing effects of radiation.
- Quercetin: enhances NO, anti-inflammatory, antioxidant, new mitochondria, protects against osteoporosis, cancer, pulmonary and cardiovascular diseases and aging

FRUIT
- Catechins: antioxidants fat burning abdominal fat 77% double total weight loss
- Salicylic acid: pain reduction
- Increases dopamine
- Improves learning and memory

BLUEBERRIES
WHOLE GRAINS
- Obesity
- Diabetes type 2
- Cancer: stomach, colon, prostate, breast
- Cardiovascular diseases
  - HTN
  - Stroke
  - Heart attacks
  - Metabolic syndrome

LIGNANS
- Blood pressure
- Total cholesterol and LDL
- HDL
- Prevents arterial blockages
- Anti-inflammatory
- Antioxidant
- Improves glucose control and insulin resistance
- Improves cognitive function
- Dozen anti-cancer properties
- Reduces belly fat

GOOD FATS
- 0-3, 0-9, 0-7
- Membrane fluidity
- Reduce inflammation (UCSD most potent)
- Antioxidant
- Lowers insulin resistance
- Telomere length linear each standard deviation in DHA and EPA ≈32% reduction in telomere shortening
- Reduces all-cause mortality
- Reduces CV mortality sudden death, MI
- Brain function: Cognitive and memory
- Normal growth and development
0-3

- Improves chemo sensitivity
- Tumor cell adhesion
- Metastasis (1/5)
- Shrinks tumors
- Apoptotic cell death
- Inhibit blood vessels
- Increases chemo inside of tumor cells

Drink

- tumor formation (Cancer Lett 1994)
- recurrences (Jpn J Cancer Res. 1998)
- estradiol (Nutr Cancer 1998)
- angiogenesis (Biofactors 2005)
- protein binders (Nutr Cancer 1998)
- Enhances chemotherapy and protects against its damaging effects (Biochim Biophys Acta 2003)
- COX-2 anti-inflammatory (Int J Cancer 2005)

GREEN TEA
SPICE

- Breaks down toxins in liver, inhibits phase 1 and enhances phase 2 enzymes (Pharmacol Toxicol. 2003; Mini Rev Med Chem. 2002)
- Prevents carcinogens from forming (Cancer Lett. 2001)
- Powerful anti-inflammatory (Pharmaceuticals 2002)
- Antioxidant- 300% more than potent than vitamin E (Pharm Pharmacol. 2003)
- Stimulates immune system (Treatments 2000)
- Works synergistically with radiation to enhance tumor cell death (Int J Oncol. 2004)
- Enhances chemotherapy

- Decreases estrogenic effect of organo-chlorines (Environ Health Perspectiv 1998; J R Soc Health. 2001)
- Down regulate estrogen receptor (Int J Cancer. 2002)
- Tumor cell death (Breast Cancer Res Treatment 1999)
- Inhibits invasion (Int J Cancer. 2002)
- Blocks IL-6 that causes cancer cells to grow faster (J Immunol. 1999; Int J Cancer. 1988)
VITAMIN D
- 50% reduction in colon, breast cancer
- Cells more resistant to toxins
- Stops tumor cell growth
- Decreases blood vessels
- Kills tumor cells apoptosis
- Boosts immune system NK cells
- Vitamin D receptor 50 genes regulated
  - Cell proliferation and immune function

EXERCISE
- Reduces mortality 29-59%
- After 3 months change in 500 genes
- Low fitness: influence as much as diabetes and smoking
- 1996 Finnish study 3.58 more likely to die of CV disease
- Unfit—fit 44% drop in all cause mortality
- Promotes longevity: lengthens telomeres
- Improves immune function
- Prevents cognitive decline improves age-related changes in synapses
- Depression and anxiety
- Decreases cardiovascular disease: 1 hour
- 48% reduction brisk walking
- Diabetes: blood sugar, complications
- Dementia and Parkinson’s
- Academic performance, memory and learning
- Sleep
- Stress reduction
- Cancer: breast, colon
  - 2008 J Clin Oncology 2-3 hours/week brisk walking a year prior to dx: 31% less likely to die
  - Post treatment for cancer 45%
  - Sedentary 4 times higher risk of death
- Breast cancer risk of dying cut in half
- Colon cancer 61% reduction in mortality
  - 50% less recurrence

EXERCISE
- Fewer complications
- Less depression, nausea, fatigue, blood clots
- Better sleep, energy, appetite, response to chemo and survival
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Sleep

- Ayurveda: Bed by 10 PM up by 6 AM
- Night nurses: J Natl Cancer Inst 2001
- 50% increased incidence
- Melatonin
- Light
- Blind women
- 50% lower incidence: Neuroendocrinol Lett 2002

Melatonin

- Antioxidant
- ↓ estrogen production: J Pineal Res. 2005
- ↑ epidermal growth factor: Neuroendocrinol Lett. 2002
- ↓ prolactin: J Natl Cancer Inst 2006
- ↑ tumor necrosis factor: J Pineal Res. 2006
- Vitamin D anticancer effects by 2020: 100 X (J Surg Res. 2003)
- When low, tumor grow 7 times faster
- Enhances chemotherapy: J Pineal Res. 2003

SLEEP

- Premature aging
- Increased mortality
- Higher incidence of HTN, CVD, diabetes, obesity, and cancer
- < 5 hours doubles risk of angina, CAD, heart attacks and strokes
- Reaction times mental function
- Emotional disturbances: anxiety and depression
- Immune system and hormonal prolactin, GH, cortisol, melatonin, NK cells
- Inflammation: chronic pain worse
Stress contributes to 90% of all illnesses: mental and physical
- Disrupts:
  - Endocrine
  - Neurological
  - Gastrointestinal
  - Immune systems
- Plays a role in:
  - Hypertension
  - Heart Disease
  - Diabetes
  - Obesity
  - Cancer

Chronically high cortisol
- Immune system suppression
  - Promotes:
    - Chronic inflammation
    - Oxygen free radicals
    - Accelerated aging
    - Autoimmune diseases
    - Infections
    - Natural Killer Cells
    - Wound healing

Minimizing stress
- Respecting rhythms of nature
- Regular schedule
- Sleep
- Exercise
- Fresh organic whole foods plant based diet
- Meditation
- Relaxing music/massage
- Walks in nature
- Laughter
- Loving relationship
- Functional Education
- Nutritional supplements and herbs
MINIMIZING STRESS

- EMDR
- Emotional Freedom Technique: Tapping
- Energy Work
- Evox
- Life Vessel
- Bach Flower Remedies
- Acupuncture

EMFs

- Damage to cells
  - Neuronal, metabolism, diminished, cell stress, premature aging
- Neurological
  - Memory loss, fatigue, headaches, ringing in ears, dizziness, sleep disorders, reduction in memory, depression, anxiety, reaction time

- Cancer
  - Leukemia, brain tumors, acoustic neuroma, salivary gland
- Brain cancer
- Nervous System
  - Alzheimer’s, Parkinson’s, ALS, brain wave changes

- Stress Response
  - Heat shock proteins
- Immune system
  - Chronic inflammation, skin reactions, swelling
- Pregnancy
- HRV
- Diabetics: increased glucose

DETOXIFICATION

- PANCHAKARMA
  - Research on Panchakarma – Overview
    - Decreases cholesterol, by lowering toxic lipid peroxide levels
    - Decrease the rate of platelet clumping and thus lymphatic congestion
    - Decreases 14 major toxic and cancer causing chemicals from body tissues including heavy metals, pesticides and other hazardous environmental chemicals
    - Significantly raised the good HDL cholesterol
    - Lowered diastolic blood pressure
    - Reduced free radicals which are the leading cause of all disease, cancer and death
    - Significant reductions in bodily complaints, irritability, bodily strain, and psychological inhibition, as well as greater emotional stability.
    - Decreased anxiety, aging and reduced doctors visits