Integrative Oncology: Blending the Best of Both Worlds

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Cvetko Integrative Medicine Program
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Focus of Today’s Talk

- Explore tools to balance emotional, mental, physical and spiritual health during and after cancer treatment
- Compare Western Medicine “reactive” paradigm of healing and the Eastern Medicine “proactive” paradigm
- Examine some of the evidence base and safety data for integrative therapies
Western Medicine Paradigm

- Illness screening
- Reactive
- Crisis medicine
- “Downstream”
- Pharmaceutical & Surgical solutions
2010: The 10 Top Prescriptions

1) Hydrocodone with acetaminophen
2) Simvastatin
3) Lisinopril
4) Levothyroxine
5) Amlodipine besylate
6) Omprazole
7) Azithromycin
8) Amoxicillin
9) Metformin
10) Hydrochlorothiazide

“Lifestyle” illnesses (high blood pressure, high cholesterol, high blood sugar, GI disturbances) account for 6 of the top 10 medicines prescribed in 2010.

Institute for HealthCare Infomatics
Eastern Medicine Paradigm

- Wellness
- Proactive
- “Upstream”
- Life balance
- Balance with nature
Huang Di Nei Jing
“The Yellow Emperor’s Inner Classic”
Published in the 1st century BCE during the Han Dynasty (206 BCE - 220 CE)
The Yellow Emperor Says:

“To administer medicine to diseases which have already developed and thereby suppress bodily chaos which has already occurred is comparable to the behavior of those who would begin to dig a well after they had grown thirsty, or those who would begin to cast weapons after they have engaged in a battle. Would these actions not be too late?”
What’s in a name?

- Integrative Medicine
- Functional Medicine
- Holistic Medicine/Wholistic Medicine
- Alternative Medicine
- Complementary Medicine
- Complementary and Alternative Medicine
A Systems Biology Approach to Understanding Health and Disease
Incidence of CAM Usage (USA) 2007

- **40% of adults**; most common modalities
  - 17.7% herbal products
  - 12.7% deep breathing exercises

- **11.8% of children**; most common modalities
  - 3.9% herbal products
  - 2.8% chiropractic or osteopathic manipulation

Barnes, PM et al. National Health Statistics Reports Number 12, December 10, 2008 (CDC/US Dept.HHS)
CAM Usage in Cancer Patients (USA)

- Depending on the definition of CAM, usage is 10-60% of cancer patients.
- 38-60% of cancer patients are taking herbs and nutritional supplements without telling their health care team.

Incidence of CAM Usage (China)

- Population-based study (n=1065) 98% used at least one form of CAM
- Most common modalities used:
  - TCM 86.7%
  - Herbs/supplements 84.8%
  - Exercise 65.5%
  - Support group 16.0%
  - Acupuncture 4.9%
- Almost all used both conventional and CAM therapies

Integrative Medicine is the practice of medicine that reaffirms the importance of the relationship between practitioner and patient, focuses on the whole person, is informed by evidence, and makes use of all the appropriate therapeutic approaches, healthcare professionals and disciplines to achieve optimal health and healing.

The Consortium of Academic Health Centers for Integrative Medicine, 2004
<table>
<thead>
<tr>
<th>Safety</th>
<th>Efficacy</th>
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<tr>
<td><strong>B. Safe but efficacy inconclusive</strong></td>
<td><strong>A. Safe and efficacious</strong></td>
</tr>
<tr>
<td>Tolerate, encourage caution, closely monitor effectiveness</td>
<td>Recommend and continue to monitor</td>
</tr>
<tr>
<td><strong>D. Not efficacious with serious risk</strong></td>
<td><strong>C. Efficacious but safety inconclusive</strong></td>
</tr>
<tr>
<td>Avoid and actively discourage</td>
<td>Consider tolerating, encourage caution, closely monitor safety</td>
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Today’s Lecture Focus – three “category A” treatments

- Mind-Body Techniques
- Acupuncture
- Nutrition
Meditation, Breathwork, Biofeedback, HeartMath™, Yoga, Tai chi, Hypnosis, Relaxation Techniques, Music Therapy, Art Therapy, Cognitive Behavioral Therapy, MBSR

All work through same mechanism
Stress Response

Hans Selye, MD
Austrian physician (1907-1982)

Stress →

Alarm phase

Response ↑

Resistance phase

Exhaustion phase

Stress →
Mind-Body Therapies

- Meta-analysis of 116 studies showed mind-body therapies in cancer patients showed a benefit in areas of
  - Anxiety
  - Depression
  - Mood
  - Nausea
  - Vomiting
  - Pain
  - Knowledge

Devine EC. The Effects of Psychoeducational Care Provided to Adults with Cancer: Meta-analysis of 116 studies. Oncol Nurs Forum, 1995; 22(9):1369-81.
Stress - Can you measure it?
Stress - Can you measure it?

Anabolic/Catabolic Balance
17-Ketosteroids/17-Hydroxysteroids Ratio

Anabolic/Catabolic Balance (FMV)

Catabolic (Wear & Tear) ↔ Anabolic (Growth & Healing)

1.0

**Catabolic**

17-Hydroxysteroids, Total* (FMV urine) 0.66 2,714 168-1,751 nmol/dl (SG)

**Anabolic**

17-Ketosteroids, Total* (FMV urine) 1.00-3.86 1,793 303-2,184 nmol/dl (SG)

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Anabolic/Catabolic Balance
17-Ketosteroids/17-Hydroxysteroids Ratio

Anabolic/Catabolic Balance (FMV)

Catabolic (Wear & Tear) ↔ Anabolic (Growth & Healing)

1.0

**Catabolic**

17-Hydroxysteroids, Total* (FMV urine) 0.72 613 168-1,751 nmol/dl (SG)

**Anabolic**

17-Ketosteroids, Total* (FMV urine) 1.00-3.86 444 303-2,184 nmol/dL (SG)
HeartMath® Coherence = Balance, Flexibility, Resilience

Yoga decreases insomnia in postmenopausal women: a randomized clinical trial

Rui Ferreira Afonso, MSc,1 Helena Hachul, MD, PhD,1,2 Elisa Harumi Kozasa, PhD,1,3 Denise de Souza Oliveira, BS,1 Viviane Goto, BS,1 Dinah Rodrigues, BS,4 Sérgio Tufik, MD, PhD,1 and José Roberto Leite, PhD1

Abstract
Meditation effects on antibody titers to influenza vaccine

Acupuncture:
The concept of Balance

Qi or Ki or Chi
Pull out force is **18% greater** at acupuncture points compared to control points

Connective tissue changes with needle rotation may explain energy movement along channels

Langevin, HM The Anatomical Record (New Anat.) 269:257-65, 2002
Recent Research on Acupuncture

- Local micro-trauma with chemical release at needle site (adenosine, bradykinin, histamine)
- Spasm reduction from needling trigger point
- Change in blood flow in the brain
- Endorphins and neurotransmitter production
- Pulse and blood pressure balanced
- Gene expression altered
Normalize Heart Rate*

Study chose 29 people with normal heart rate and divided into:
- 10 with the lowest
- 9 with intermediate
- 10 with the highest

RESULTS
After acupuncture in same point in all:
7 of the 10 in the low group saw an increase in heart rate
9 of the 10 in the high group saw a decrease in heart rate

Baalegaard 1993

*similar results with blood pressure
Ear points and pain medication use during surgery

- 120 patients randomly assigned
- Patients and anesthesiologists both blinded
  - Specific ear points
  - Sham ear points
- Titrate bp, hr with pain medication
- 15% less pain med in acu group

Wetzel, B, Clin J Pain, 2011 27(3) 262-7
Acupuncture Research: Post Chemotherapy Fatigue

- 31 Memorial Sloan-Kettering patients with persistent fatigue two years after chemotherapy
- Mean improvement in fatigue with acupuncture 31.1% (weekly or twice weekly visits)

Acupuncture and Menopausal Symptoms

- Multicenter RCT with two arms
  - 10 acupuncture treatments plus self care
  - Self care only

- Hot flash frequency
  - Decreased by 5.8 in 24 hours in the acupuncture group
  - Decreased by 3.7 in 24 hours in the control group

Borud, EK Menopause 16:3, 2009, 484.
Diet, Nutrition, Nutritional Supplements

Unprocessed food
Whole, fresh,
High in fiber and nutritional value
Increase in telomerase activity from baseline to 3 months


p < 0.05 (two-tailed)
Dietary Adherence and Changes in C-Reactive Protein

Dietary Adherence

Baseline-12m change in (log)CRP
Fish Intake Reduces All-cause Mortality and CHD in Diabetic Nurses

<table>
<thead>
<tr>
<th>Fish intake</th>
<th>Relative CHD</th>
<th>All-cause mortality</th>
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<tr>
<td>1-3 x/month</td>
<td>0.70</td>
<td>0.88</td>
</tr>
<tr>
<td>1 x/week</td>
<td>0.60</td>
<td>0.70</td>
</tr>
<tr>
<td>2-4 x/week</td>
<td>0.64</td>
<td>0.61</td>
</tr>
<tr>
<td>≥ 5 x/week</td>
<td>0.36</td>
<td>0.45</td>
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Hu FB et al., Circulation 107 **2003** 1852
What Fish are safe?
Environmental Working Group
www.ewg.org/safefishlist

What Fruits and Vegetables are safe?
Environmental Working Group
“Dirty Dozen Clean Fifteen”
www.ewg.org
Nutritional Supplements

- Supplement quality (?what brand) and Supplement quantity (?what dose)
- References
  - Natural Standard
  - Natural Medicines Comprehensive Database
  - American Botanical Council
  - ConsumerLab
Herb-Drug Interactions

- Antioxidants
- St. John’s Wort
- Fish oil
- Plant-based hormone-active supplements

Chaste Tree (Vitex Agnus-Castus)
Individual genetic nutritional and metabolic needs

- MTHFR
- Cyp2D6
- COMT
- Apo E2
80% Rule (stop eating when you’re 80% full)
Plant Power (more veggies, less protein and processed foods)
Red wine (consistency and moderation)
Plan de vida (purpose for life)
Beliefs (spiritual or religious participation)
Down shift (work less, slow down, rest, take a vacation)
Move (find ways to move mindlessly, make moving unavoidable)
Belong (create a healthy social network)
Your tribe (make family a priority)
Thanks for your attention!