Evidence-Based Integrative Medicine in Oncology

Navneet Kaur, MD
Assistant Professor
Department of Supportive Care Medicine
City of Hope National Medical Center
Objectives

• Define the categories of Complementary, Alternative, and Integrative Medicine (CAIM)
• Definitions
• Discuss evidence based integrative medicine
• Discuss resources for patients, caregivers, and providers
Conflict of interest

None
Categories of Complementary, Alternative, and Integrative Medicine (CAIM) - NCCIH

■ Nutritional/ Natural Products
  a. Special diets, dietary supplements, herbs, probiotics

■ Psychological/ Mind-body
  a. Meditation, prayer, mindfulness

■ Physical/ Body-based
  a. Massage, spinal manipulation, osteopathic

■ Combinations
  a. Yoga, dance or art therapies
  b. Traditional chinese medicine like tai chi, qi gong or acupuncture
  c. Reiki
  d. Relaxation techniques (such as breathing exercises and guided imagery)
10 most common complementary health approaches among adults—2012

- Natural Products*: 17.7%
- Deep Breathing: 10.9%
- Yoga, Tai Chi, or Qi Gong: 10.1%
- Chiropractic or Osteopathic Manipulation: 8.4%
- Meditation: 8.0%
- Massage: 6.9%
- Special Diets: 3.0%
- Homeopathy: 2.2%
- Progressive Relaxation: 2.1%
- Guided Imagery: 1.7%

* Dietary supplements other than vitamins and minerals.

CONVENTIONAL MEDICINE
Also known as Western medicine, refers to a system of medicine that treats the disease and symptoms with drugs, surgery, radiation and similar practices.

ALTERNATIVE MEDICINE
A range of medical therapies that may include homeopathy, acupuncture, herbalism and others.

COMPLEMENTARY MEDICINE
Combines alternative and conventional medical approaches, often considered a hybrid.

FUNCTIONAL MEDICINE
Scientifically-based approaches that focus on disease roots and prevention with treatment for the patient rather than the illness.

INTEGRATIVE MEDICINE
Combines conventional and alternative medicines in a coordinated way. Emphasis on data driven solutions that are safe, and patient focused.
What is Integrative Medicine?

• Combines with conventional treatments for cancer to help patients cope with symptoms and side effects of treatment.

• A holistic modality that delivers evidence based patient-centered care.

• It utilizes all appropriate therapeutic approaches and healthcare professionals to achieve optimal health and healing.

-NCCIH
What are Alternative Therapies?

- If a non-mainstream approach is used instead of conventional medicine, it’s considered “alternative.”
- For example, instead of chemotherapy, some people promote taking a particular herb or supplement or avoiding specific foods.
- Alternative therapies are disproved or unstudied methods that do not treat cancer.
- They may even be harmful.
Whole Person Health

• Helping individuals, families, communities, and populations improve and restore their health in multiple interconnected domains—biological, behavioral, social, environmental—rather than just treating disease.

• Research on whole person health includes expanding the understanding of the connections between these various aspects of health, including connections between organs and body systems.
Why the interest in integrative medicine?

The University Hospital Mannheim in Germany collected a survey over a 4-month period in 2018

- 325 patients with biopsy-proven sarcoma (59%), gastrointestinal stromal tumors (23%), and desmoid tumors (18%)
- 51% of participants had used CAMs in their lifetime -- 15% of them strictly during treatment for their disease.

Patients' reasons for using CAM included:

- Boost the immune system (78%)
- Help them feel better (76%)
- Cope with cancer treatment (45%)
- Reduce stress (53%)
- Manage symptoms or side effects (36%)
Categories of Complementary, Alternative, and Integrative Medicine (CAIM) - NCCIH

- **Nutritional/ Natural Products**
  - a. Special diets, dietary supplements, herbs, probiotics

- **Psychological/ Mind-body**
  - a. Meditation, prayer, mindfulness

- **Physical/ Body-based**
  - a. Massage, spinal manipulation, osteopathic

- **Combinations**
  - a. Yoga, dance or art therapies
  - b. Traditional chinese medicine like tai chi, qi gong or acupuncture
  - c. Reiki
  - d. Relaxation techniques (such as breathing exercises and guided imagery)
"I'm taking you off the herbal tea."
General recommendations for cancer survivors:

- Nutritional & physical assessment/counseling should begin as soon as possible after diagnosis.

Recommendations to improve long-term health and increase the likelihood of survival:

- Avoid obesity and maintain or increase muscle mass through diet and physical activity.
- Regular physical activity
- Healthy eating pattern
- Follow the general advice of the American Cancer Society Guideline for Diet and Physical Activity for Cancer Prevention to reduce risk of a new cancer.
American Cancer Society Guideline on Nutrition and Physical Activity for Cancer Prevention Recommendations for Individuals (2022)

• Achieve and maintain a healthy body weight
• Be physically active
  – Adults: 75-150 min of vigorous-intensity physical activity
  – Children and adolescents: at least 1 h of moderate-intensity or vigorous-intensity activity each day
• High nutrient density foods, variety of vegetables, fruits, whole grains
• Limit or avoid: red and processed meats, sugar-sweetened beverages, highly processed foods and refined grain products.
• Limit alcohol
Nutritional/ Natural Products Risks

- Risks of interactions
- Increased toxicity
- Risk of contaminants/toxins in non-regulated products
- Loss of efficacy of anti-cancer treatments
- Limited research
- **Always discuss these products with your Oncologist**
Documented Interactions

- Beta carotene during radiation therapy
- St. John’s Wort
  - Irinotecan, docetaxel, imatinib
- Green Tea
  - Bortezomib
- Ginger, garlic, ginseng
  - Anti-coagulation
  - Imatinib and docetaxel
Wisconsin Ginseng (*Panax quinquefolius*) to Improve Cancer-Related Fatigue: A Randomized, Double-Blind Trial, N07C2

Debra L. Barton, Heshan Liu, Shaker R. Dakhil, Breanna Linquist, Jeff A. Sloan, Craig R. Nichols, Travis W. McGinn, Philip J. Stella, Grant R. Seeger, Amit Sood, Charles L. Loprinzi

![Graph showing percentage change in fatigue levels with ginseng and placebo over 4 and 8 weeks.](chart.png)

- **4 Weeks**
  - During treatment: Ginseng vs. Placebo: *P* = 0.02
  - After treatment: Ginseng vs. Placebo: *P* = 0.86

- **8 Weeks**
  - During treatment: Ginseng vs. Placebo: *P* = 0.01
  - After treatment: Ginseng vs. Placebo: *P* = 0.07

*J Natl Cancer Inst; 2013;105:1230–1238*
Categories of Complementary, Alternative, and Integrative Medicine (CAIM) - NCCIH

- Nutritional/ Natural Products
  a. Special diets, dietary supplements, herbs, probiotics

- Psychological/ Mind-body
  a. Meditation, prayer, mindfulness

- Physical/ Body-based
  a. Massage, spinal manipulation, osteopathic

- Combinations
  a. Yoga, dance or art therapies
  b. Traditional chinese medicine like tai chi, qi gong or acupuncture
  c. Reiki
  d. Relaxation techniques (such as breathing exercises and guided imagery)

National Center for Complementary and Integrative Health (NCCIH), a part of the National Institutes of Health (NIH) - the Federal Government's lead agency for scientific research on complementary and integrative health approaches
I'VE NEVER MET ANYONE SO THOUGHTLESS IN MY LIFE. KEEP UP THE GOOD WORK.

THANK-YOU MASTER
Psychological/ Mind-Body Practices

- Stress (grade A)
- Mood Disturbance (grade A)
  - Depression, anxiety
- Quality of Life (grade A)
- Insomnia (grade C)
Categories of Complementary, Alternative, and Integrative Medicine (CAIM) - NCCIH

- Nutritional/ Natural Products
  a. Special diets, dietary supplements, herbs, probiotics
- Psychological/ Mind-body
  a. Meditation, prayer, mindfulness
- Physical/ Body-based
  a. Massage, osteopathic
- Combinations
  a. Yoga, dance or art therapies
  b. Traditional chinese medicine like tai chi, qi gong or acupuncture
  c. Reiki
  d. Relaxation techniques (such as breathing exercises and guided imagery)
Oncology Massage Therapy

• Mood Disturbance (B)
• Depression
• Anxiety & Stress (C)
• Pain (C)
• Constipation (C)
• Neuropathy
Massage Therapy versus Simple Touch to Improve Pain and Mood in Patients with Advanced Cancer

A Randomized Trial

Jean S. Kutner, MD, MSPH; Marialine C. Smith, RN, PhD; Lisa Corbin, MD; Linnea Hemphill, APRN, BC, MSN; Kathryn Bentoe, MSPH; B. Karen Mellis, BS; Brenda Beatty, MSPH; Sue Felton, MA; Traci E. Yamashita, MS; Lucinda L. Bryant, PhD, MSHA; and Diane L. Fairclough, DrPH

**EFFECT SIZE WITH 95% CONFIDENCE INTERVAL**

<table>
<thead>
<tr>
<th></th>
<th>-1</th>
<th>worse</th>
<th>0</th>
<th>better</th>
<th>1</th>
<th>P-value to contrast treatment arms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IMMEDIATE EFFECT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mood (MPAC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Pain (MPAC)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Heart Rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.08</td>
</tr>
<tr>
<td>Respiratory Rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.16</td>
</tr>
<tr>
<td><strong>SUSTAINED EFFECTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Pain (BPI)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.66</td>
</tr>
<tr>
<td>Worst Pain (BPI)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.53</td>
</tr>
<tr>
<td>Pain Interference (BPI)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.60</td>
</tr>
</tbody>
</table>

*P-values indicate statistical significance.
Date active: 2007-present

Livestrong at the YMCA

We partner with the YMCA of the USA to promote the importance of physical activity after a cancer diagnosis.
Categories of Complementary, Alternative, and Integrative Medicine (CAIM) - NCCIH

- Nutritional/ Natural Products
  a. Special diets, dietary supplements, herbs, probiotics
- Psychological/ Mind-body
  a. Meditation, prayer, mindfulness
- Physical/ Body-based
  a. Massage, spinal manipulation, osteopathic

**Combinations**

a. Yoga, dance or art therapies
b. Traditional chinese medicine like tai chi, qi gong or acupuncture
c. Reiki
d. Relaxation techniques (such as breathing exercises and guided imagery)
Yoga improved:
  • Sleep quality, duration, efficiency, daytime dysfunction, reduced sleep medication use

No improvement in:
  • Sleep disturbance
Tai Chi and Qi Gong

Tai chi
- A practice that involves a series of slow gentle movements and physical postures, a meditative state of mind, and controlled breathing.
- Originated as an ancient martial art in China

Qigong
- Psychological and physical components
- Regulation of the mind, breath, and body’s movement and posture
- Uses exercises to optimize energy within the body, mind, and spirit, with the goal of improving and maintaining health and well-being.
- Ancient traditional Chinese medicine.
Tai Chi and Qi Gong

- A 2019 review:
  a. 915 people with different types of cancer.
  b. Average of 60-minute sessions 2-3 times a week for 6-12 weeks.
  c. **Qigong** significantly improved symptoms of fatigue and sleep quality.

- A 2017 review:
  a. 1,751 people with various cancers
  b. **Using qigong was promising for managing physical and psychological symptoms related to cancer and its treatment**
Qigong Improves Quality of Life in Women Undergoing Radiotherapy for Breast Cancer

Results of a Randomized Controlled Trial

Improvement in fatigue, depression and quality of life

Effects of Center-Based Delivery of Tai Chi and Qi Gong Group Classes on Self-Reported Symptoms in Cancer Patients and Caregivers

Reduction in physical distress. Improvement in well-being, fatigue
Acupuncture

Qi = Vital life force energy flows along the meridian points
Acupuncture

Efficacy shown in randomized controlled trials:

- **Chemotherapy-related nausea & vomiting (B)**
- Pain (C)
- Cancer-related fatigue (C)
- Xerostomia/dry mouth (C)
- Hot Flashes (C)
- Neuropathy (C)
- Insomnia
- Anxiety / depression
I have no idea what I'm doing.
National Comprehensive Cancer Network (NCCN) Guidelines for Palliative Care

• Pain
  – Acupuncture, MBSR (mindfulness based stress reduction), relaxation therapy
• Nausea & Vomiting
  – Acupuncture and acupressure, hypnosis, and CBT (cognitive behavioral therapy)
• Dyspnea
  – Stress management and relaxation therapy
• Meditation & Yoga
  – Stress and anxiety
  – Mood disturbance and depression
• Acupuncture
  – Nausea and vomiting
• Music Therapy
  – Stress and anxiety
  – Mood disturbance and depression
Resources for Patients, Caregivers and Providers
Integrative Medicine

Integrative medicine is a combination of medical treatments for cancer and complementary therapies to cope with the symptoms and side effects. You may sometimes hear integrative medicine called complementary and alternative medicine or CAM. However, there are no true “alternatives” to cancer treatment.

This section provides information on the following topics:

- Evaluating Complementary and Alternative Therapies
  How to figure out if integrative medicine can be combined with standard cancer treatment

- Types of Complementary Therapies
  Therapies that may help improve quality of life

- Complementary Therapies and Clinical Trials
  How to find and join a clinical trial

- Taking Vitamins, Herbal Products, and Other Dietary Supplements During Cancer
  Types of products and recommendations for use
What does NCCIH do?

We conduct and support research and provide information about complementary health products and practices.
Questions?
References