Integrative Oncology: Understanding the Practice and the Evidence

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- AHN-BC, CHTP, Reiki Master, Reflexologist

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- CAMEO Project

Conflicts of Interest
Dr. Fouladbakhsh and Dr. Balneaves have nothing to disclose.
Permissions
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Learning Objectives
1. Understand the complementary and alternative medicine (CAM) therapies most frequently used among patients with cancer.
2. Learn about the use of energy therapies in reducing the side effects associated with cancer therapies.
3. Become knowledgeable on the current evidence for use of integrative oncology treatments.
4. Recognize the role of the advanced practitioner in integrative nursing/health care practice.

Understanding CAM, Integrative Health Care, and Our Patients
What Is CAM and Integrative Care?

Complementary and alternative medicine (CAM) includes thousands of diverse medical and health care treatments, products, and practices that are not considered part of conventional biomedicine.

Many CAM therapies:
- Have existed for millennia within alternative systems of care, such as Traditional Chinese Medicine and Ayurveda. Others are newly emerging.
- Are increasingly being integrated into conventional health care as evidence of effectiveness emerges.

What Is CAM?*

“A group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine…”

*National Center for Complementary and Alternative Medicine (NCCAM)

- Body-based
- Mind-body
- Biologically based
- Energy
- Whole systems

CAM Terminology

Complementary medicine
Used together with conventional medicine

Alternative medicine
Used in place of conventional medicine

Integrative medicine
Combines treatments from conventional medicine and CAM for which there is evidence of safety and effectiveness; also called integrated medicine
**Are you currently using some form of CAM therapy in your practice?**

A. Yes
B. No

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**Why It’s Important to Know About CAM**

- Estimates of CAM use in the US range from 34% to 76%, depending on the therapies included and populations studied.
- 44% of all cancer survivors use CAM therapies. Prevalence is increasing.
- Use of special diets, herbs, and supplements is significantly higher among those with cancer (5%, 23%, and 67%, respectively).

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**Prevalence of CAM Use**

<table>
<thead>
<tr>
<th>CAM USE (past 12 mo)</th>
<th>CANCER POP</th>
<th>NONCANCER POP</th>
<th>p VALUE*</th>
</tr>
</thead>
<tbody>
<tr>
<td>At least 1 therapy excl. prayer</td>
<td>76.4</td>
<td>62.7</td>
<td>.6182</td>
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<tr>
<td>At least 1 therapy excl. prayer, vitamins</td>
<td>43.8</td>
<td>37.1</td>
<td>.001*</td>
</tr>
<tr>
<td>Providers only</td>
<td>18</td>
<td>15.8-20</td>
<td>16.1</td>
</tr>
<tr>
<td>Practices only</td>
<td>22.2</td>
<td>20.2-24.6</td>
<td>20.2</td>
</tr>
<tr>
<td>Products only</td>
<td>69.7</td>
<td>56.1</td>
<td>55.7-71</td>
</tr>
<tr>
<td>CAM combinations</td>
<td>27.4</td>
<td>23.8</td>
<td>28.8-24.5</td>
</tr>
<tr>
<td>Prayer</td>
<td>62</td>
<td>58.6-64.8</td>
<td>46.9</td>
</tr>
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</table>

*Pearson Chi² p < .05
Based on NHIS 2007 analysis
### Use of CAM Providers

<table>
<thead>
<tr>
<th>THERAPY</th>
<th>CANCER POP</th>
<th>95% CI</th>
<th>NONCANCER POP</th>
<th>95% CI</th>
<th>p VALUE*</th>
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</thead>
<tbody>
<tr>
<td>Acupuncture</td>
<td>1.6</td>
<td>0.98-2.2</td>
<td>1.4</td>
<td>1.2-1.6</td>
<td>.58</td>
</tr>
<tr>
<td>Ayurveda</td>
<td>0.1</td>
<td>0.01-0.78</td>
<td>0.1</td>
<td>0.04-0.19</td>
<td>.89</td>
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<tr>
<td>Biofeedback</td>
<td>8.5</td>
<td>0.19-0.19</td>
<td>0.1</td>
<td>0.07-0.22</td>
<td>.38*</td>
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<tr>
<td>Chelation</td>
<td>0.02</td>
<td>0.003-0.16</td>
<td>0.05</td>
<td>0.00-0.12</td>
<td>.42</td>
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<tr>
<td>Chiropractic/osteopathic</td>
<td>9.8</td>
<td>8.19-11.6</td>
<td>8.3</td>
<td>7.7-8.8</td>
<td>.27</td>
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<tr>
<td>Energy healer</td>
<td>1.0</td>
<td>0.5-1.88</td>
<td>0.5</td>
<td>0.4-0.63</td>
<td>.82*</td>
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<tr>
<td>Hypnosis</td>
<td>0.4</td>
<td>0.11-1.7</td>
<td>0.2</td>
<td>0.17-0.34</td>
<td>.54</td>
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<td>Massage</td>
<td>8.7</td>
<td>7.1-10.5</td>
<td>6.1</td>
<td>7.5-6.6</td>
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<tr>
<td>Naturopathy</td>
<td>0.3</td>
<td>0.1-0.61</td>
<td>0.3</td>
<td>0.25-0.54</td>
<td>.87</td>
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<tr>
<td>Indigenous healer</td>
<td>0.2</td>
<td>0.04-1.1</td>
<td>0.4</td>
<td>0.26-0.65</td>
<td>.54</td>
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<td>Movement therapies</td>
<td>8.6</td>
<td>0.3-1.3</td>
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<td>.82*</td>
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<td>Homeopathy provider</td>
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<td>0.1-0.93</td>
<td>0.4</td>
<td>0.2-0.65</td>
<td>.87</td>
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</table>

*Pearson Chi² p < .05

### Use of CAM Practices & Products

<table>
<thead>
<tr>
<th>PRACTICE</th>
<th>CANCER POP</th>
<th>95% CI</th>
<th>NONCANCER POP</th>
<th>95% CI</th>
<th>p VALUE*</th>
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<tbody>
<tr>
<td>Special diets</td>
<td>4.8</td>
<td>3.4-6.0</td>
<td>3.5</td>
<td>3.1-3.8</td>
<td>.05</td>
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<tr>
<td>South Beach Diet</td>
<td>1.7</td>
<td>1.0-2.7</td>
<td>1.0</td>
<td>0.8-1.2</td>
<td>.03</td>
</tr>
<tr>
<td>Yoga</td>
<td>4.9</td>
<td>3.8-6.4</td>
<td>6.0</td>
<td>5.5-6.4</td>
<td>.17</td>
</tr>
<tr>
<td>Tai chi</td>
<td>0.9</td>
<td>0.5-1.5</td>
<td>1.0</td>
<td>0.8-1.2</td>
<td>.75</td>
</tr>
<tr>
<td>Qigong</td>
<td>0.2</td>
<td>0.06-0.5</td>
<td>0.3</td>
<td>0.2-0.4</td>
<td>.41</td>
</tr>
<tr>
<td>Meditation</td>
<td>0.7</td>
<td>0.3-1.1</td>
<td>0.2</td>
<td>0.17-0.34</td>
<td>.54</td>
</tr>
<tr>
<td>Guided imagery</td>
<td>2.8</td>
<td>2.0-3.7</td>
<td>2.1</td>
<td>1.8-2.5</td>
<td>.1</td>
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<tr>
<td>Progressive relaxation</td>
<td>2.9</td>
<td>2.0-4.0</td>
<td>2.9</td>
<td>2.6-3.2</td>
<td>.9</td>
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<tr>
<td>Deep breathing</td>
<td>14.1</td>
<td>12.4-16</td>
<td>12.3</td>
<td>11.7-13</td>
<td>.05</td>
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<tr>
<td>Herbs</td>
<td>22.7</td>
<td>20.5-25</td>
<td>17</td>
<td>16.2-18</td>
<td>.001</td>
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<tr>
<td>Homeopathic products</td>
<td>1.4</td>
<td>0.8-2.3</td>
<td>1.8</td>
<td>1.6-2.0</td>
<td>.38</td>
</tr>
<tr>
<td>Vitamins</td>
<td>66.6</td>
<td>63.7-70</td>
<td>53.5</td>
<td>52.4-55</td>
<td>.001</td>
</tr>
</tbody>
</table>

*Pearson Chi² p < .05

### What Does the Popularity of CAM Mean for Advanced Practitioners?

- CAM is a reality of cancer care
- Potential harms and benefits must be addressed in the context of conventional treatments
- Consideration of role of APNs in addressing CAM and integrative oncology
  - Support informed decisions
  - Provide evidence and/or therapies
  - Referrals
What percentage of your oncology patients do you estimate are using CAM therapies?

A. 100%
B. 75%
C. 50%
D. 25%
E. Less than 25%

So why do we use CAM therapies, and how does this affect our health?

Reasons for CAM Use

• Quality of life
• Desire for control
• Seeking hope
• Prior use of CAM
• Health beliefs
• Natural treatment option
• Culture
• Availability of CAM
• Dissatisfaction with conventional care
On the plus side:

- Potential for positive health benefits
- Improved health and healing, health promotion, and wellness
- Enhanced quality of life
- Management of symptoms such as pain, insomnia, depression, and anxiety, which are more prevalent among cancer survivors

*What's needed... Strong research to establish the evidence that varies by therapy*

Wide World of CAM

- Estimated there are over 4,000 CAM therapies
- Many come from alternative medical systems
  - Traditional Chinese medicine
  - Ayurvedic medicine
  - Homeopathic medicine
- How do we classify these therapies and understand their benefits and risks?
- How do we evaluate those who provide them?

Energy Therapies

- Approach to working with the body's system of energies for promoting health
- Energy body is a subtle part of the physical body
  - Meridians are energy pathways
  - Chakras are energy centers in the body
Philosophy and Theory

Concepts

• Biofield
• Electromagnetic field, biophotons*
• Chakras, meridians, universal consciousness
• Energy grids and interconnectedness
• Do these explain effects of energy therapies, intercessory and distant healing, and prayer?

*Photons/second: Intensity level of human emission of electromagnetic radiation. Human tissue radiates in ultraviolet region of light spectrum.


Energetic Images

Aura - Biofield
Energy Grid
Nonlocal Consciousness

Chakras

Energy Therapies

Practitioners assist with energy balancing

• Healing touch
• Therapeutic touch
• Reiki
• Acupuncture
• Acupressure
• Qigong
• Tai chi/yoga
• Open the chakras
• Balance energy flow
• Smooth energy field
• Open energy blockages at meridian points
• Moving and still meditation
Energy Therapies

- Use light touch on and above the body
- Techniques direct healing energy to specific sites
- Can be used for self-care: Relaxation and pain relief

- Healing Touch: 6 levels, certification takes 2-3 yr
- Reiki: 3 levels and Reiki Master (teacher)
- Therapeutic Touch: Beginning, intermediate, advanced

www.healingtouchinternational.org
www.reiki.org
www.therapeutic-touch.org

Potential Benefits and Risks

- Reduce pain
- Wound healing
- Decrease anxiety
- Ease transition during dying process
- Alleviate depression
- Reduce fatigue
- Assist with grieving
- Decrease stress
- Promote comfort

Risks: Limited information is available

Relaxation and Balancing Energy

Hands placed on patient's chakras

Pain Drain

Practitioner serves as channel to balance energy flow

Pain Management: Healing Touch

**Purpose:** Identify outcomes of HT for chronic and acute pain in non-hospitalized clients.

**Research questions**
- What percentage of patients seek HT for pain management?
- Is there a significant difference in self-reported pain intensity pre- and post-HT?
Study Results: Demographics

<table>
<thead>
<tr>
<th>Number of clients treated</th>
<th>N = 342</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of treatments completed</td>
<td>N = 939</td>
</tr>
<tr>
<td>Gender: Female</td>
<td>79% (270)</td>
</tr>
<tr>
<td>Male</td>
<td>21% (72)</td>
</tr>
<tr>
<td>Age: Mean (Range)</td>
<td>48 (3-87 yr)</td>
</tr>
<tr>
<td>Marital Status: Married</td>
<td>53% (182)</td>
</tr>
<tr>
<td>Single/widowed</td>
<td>47% (161)</td>
</tr>
<tr>
<td>Referral Source: Another person Hospital, MD</td>
<td>98%</td>
</tr>
<tr>
<td></td>
<td>2%</td>
</tr>
</tbody>
</table>

Results: Pain Relief

- 72% (247 clients) complained of pain
- 64% of HT treatments (541) for pain management

Pain Intensity Scores
Pre-treatment: Mean 4.68, SD 2.41
Post-treatment: Mean 1.81, SD 1.94

GEE Model Analysis
- Significant pain improvement following HT intervention

Understanding Reiki

Reiki International Center for Reiki Training
Reiki

• REI = Universal spiritual wisdom
• KI = Life force energy
  • Non-physical energy that animates all living things
• Based on the teachings by Mikao Usui of Japan in the 1800s, brought to the west by one of his students, Mrs. Takata
• Reiki levels: I & II, ART & Master, Karuna Reiki

International Center for Reiki Training (ICRT)

ICRT Website (info and slide presentation)
www.reiki.org

Reiki Free Newsletter
www.reiki.org/NewsletterPage/newsletter.html

Reiki Research Summary
www.centerforreikiresearch.org

Acupuncture

Acupuncture may include:
• Needling
• Pressure
• Moxibustion: Burning of herb called mugwort at needle site
• Series of treatments (~10)
• Covered by some insurances
Acupuncture

Image courtesy Beaumont Integrative Medicine Center, Royal Oak, MI

Children and Acupuncture

Columbia-Presbyterian, NYC
Acupuncture for Children with Cancer

PEDsCAM

Acupressure and Reflexology

Reflexology research: Teens with recurrent headaches

**Synthesis of IO Evidence**
- The Society for Integrative Oncology (SIO)
  - Integrative Oncology Practice Guidelines (2009)
    - www.integrativeonc.org
- World Cancer Research Fund and American Institute for Cancer Research (WCRF and AICR)
    - Designed to help reduce risk of cancer worldwide
    - Suitable for all societies
    - http://www.dietandcancerreport.org/

**The SIO Guidelines** recommend that all patients should:
- Be asked about the use of patient-centered manner by qualified personnel
- Be advised to avoid therapies promoted as “alternatives” to mainstream care

**Body-Based “Touch” Therapies**

**Recommended**
- Massage therapy for anxiety and pain
- Manual lymph drainage with compression bandaging for lymphedema

**Caution**
- Massaging on or near radiation treatment field
- Excessive rocking motions for patients with nausea

**Not Recommended:**
- Deep or intense pressure:
  - Near lesions; enlarged lymph nodes, radiation field sites,
    medical devices, or surgery sites
  - In patients with a bleeding tendency

Mind-Body Therapies

**Recommended**
- Mind-body therapies practiced over time can reduce anxiety, mood disturbance, chronic pain, and stress and improve quality of life and sleep
- For nausea and vomiting: Visualization, meditation, relaxation, biofeedback, prayer

**Caution**
- Hypnosis may cause dizziness, nausea, or headache when being brought out of a trance by an inexperienced hypnotherapist

**Not Recommended**
- Hypnosis on individuals with psychosis or certain personality disorders

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Mindfulness-Based Stress Reduction (MBSR)

**WHAT IS IT?**
- A structured psychological and educational therapy that combines mindfulness meditation with hatha yoga, administered over 8 wk
- "Moment-to-moment, non-judgmental awareness"

**WHAT DOES THE EVIDENCE SAY?**
- Clinical trials have shown improvements in mood and sleep quality and reductions in stress
- Beginning evidence of positive impact on immune system
- Further clinical trials are recommended

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Yoga

**WHAT IS IT?**
- Combines physical movement, breath control, and meditation

**WHAT DOES THE EVIDENCE SAY?**
- Favorable outcomes for...
  - Improved sleep quality
  - Overall quality of life
  - Social and emotional well-being
- Study: Yoga group vs. supportive counseling
  - Decreased nausea following 4 chemo cycles
  - Better quality of life and mood
  - Higher natural killer cell percentages
Energy Therapies

**Recommended**
- Reiki and therapeutic touch are safe and may reduce stress and enhance quality of life

**Caution**
- Limited evidence as to efficacy for symptom management, including reducing pain and fatigue

**Not Recommended**
- Bio-electromagnetically based therapies, due to concern over toxicity and increased cancer risk; no controlled trials showing effectiveness for cancer treatment or symptom control

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Acupuncture

**Recommended**
- Poorly controlled pain, nausea with chemo or surgery
- Acupressure wristbands on day of chemo for nausea and vomiting
- Hot flashes not amenable to drugs; radiation-induced dry mouth

**Caution** (More clinical studies needed)
- Shortness of breath or fatigue or neuropathy

**Not Recommended**
- Pregnancy, low platelets or white blood cells, severe thrombocytopenia, bleeding problems, or neutropenia
- AVOID acupuncture at tumor and metastasis site, limbs with lymphedema, and surgery sites

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Biologically Based Diet

**Recommended**
- Learn about proper nutrition to promote basic health
- Select a wide variety of foods including vegetables, fruits, whole grains, and beans
- See a nutritionist for evaluation of deficits. For older cancer survivors, nutritional supplementation may be required.
- Be as lean as possible without becoming underweight

**Caution:** Limit using the following foods:
- High sugar, high salt, low fiber, high fat foods; red meat
- Alcohol to 2 (men) or 1 (women) drinks/day, if consumed at all
- Salty foods

**Not Recommended**
- Processed meats and foods
Foods to Eat on a Daily Basis

- Berries
- Brazil nuts
- Citrus
- Cruciferous vegetables
- Fish and flax
- Legumes
- Tea
- Tomatoes
- Yogurt
- Vegetables: dark, orange, red, green

Natural Health Products (NHPs)

**Recommended**
- Evaluate use of NHPs prior to the start of cancer treatment
- Canadian Cancer Society recommends Canadians use 1,000 IU of vitamin D during winter months for cancer prevention
- Ginger supplements for nausea and vomiting (but consult health professional)

**Caution**
- Consult a trained health-care provider if using NHP for anti-tumor effects
- Use only NHPs within the context of clinical trials, recognized nutritional guidelines, and under close evaluation and monitoring of risks and benefits, by trained health-care providers

**Not Recommended**
- Dietary supplements usually unnecessary

An Exception: Vitamin D

- **Canadian Cancer Society**
  2007 recommendation: Adult Canadians should use 1,000 IU of vitamin D during fall/winter months for cancer prevention
- Additional research needed to define the amount that will maximize health benefits
- Role of vitamin D in other chronic diseases
  - Cardiovascular, rheumatoid arthritis, MS
Vitamins and Minerals: How Much Do I Need?

- A balanced diet rich in fruits and vegetables requires little supplementation.
- Dietary recommended intake (DRI) = Recommended level of vitamin and mineral intake for overall health.

But…is integrative oncology part of my scope of practice?

Do you see CAM therapies as something you should address as part of your role in oncology care?

A. Yes
B. No
C. Unsure
YES!!

- Support access to evidence-based knowledge to ensure informed decisions
- Provide select CAM therapies IF trained/certified (e.g., acupuncture)
- Communicate and consult with team re: patient's CAM use to ensure safe care
- Monitor and evaluate outcomes/side effects
- Document care provided

When CAM Is Not Addressed…

- Safety Issues
  - Concurrent use of CAM with conventional tx
  - Harmful CAM therapies
  - Financial harm
- Communication Issues
  - Shuts the door to future dialogue about CAM
  - Impacts communication re: other sensitive issues
- Potential Benefits
  - Supportive care and symptom management
  - Preservation of hope
  - Placebo effect

Ethics and CAM Decisions

- Principles
  - Autonomy/self-determination
  - Beneficence
  - Do no harm
- Special context of pediatric oncology and CAM

Patients have a right to make what we may see as the “wrong” decision!
Shared Decision-Making

An integrative process between client and health professionals that:

• Engages the client in decision-making
• Provides client with information about treatment options
• Facilitates the incorporation of client preferences and values into the plan of care

Open the Dialogue

• Understand patients’ goals, beliefs, and values related to CAM use
• Review diet and exercise status
• Determine patient preferences re: decision-making
• Culturally sensitive language needed
  ▪ Avoid “CAM”
  ▪ Provide examples
  ▪ Normalize CAM use
• Revisit throughout cancer journey

Locating and Communicating Evidence-Based Information

• Unbiased and non-judgmental approach
• Look for both efficacy and safety information
• Avoid confusing ‘no evidence’ with ‘no efficacy’
• Empower patients to select therapies that meet their goals
• Recommending therapies vs. translating evidence
• Consider appropriate referrals
**Cancer and CAM Websites**

- Memorial Sloan-Kettering Herbs & Botanical Database
  www.mskcc.org/mskcc/html/11570.cfm
- National Cancer Institute – OCCAM
  cam.cancer.gov
- CAM-CANCER
  www.cam-cancer.org

**General NHP Websites**

- Natural Medicines Comprehensive Database
  Summaries of NHPs, requires a subscription
  www.naturaldatabase.com
- Natural Standard
  Summaries of NHPs, access via CAMEO website
  www.naturalstandard.com
- NIH Office of Dietary Supplements
  Dietary Supplement Fact Sheets
  ods.od.nih.gov
Working Through the Decision

SCOPED*
Situation
Choices
Objectives
People
Evaluation
Decision

*Jeff Belkora, PhD, www.scoped.org

Monitoring the Decision

• Assist in development of a monitoring plan
  □ How will they know a therapy is working?
    Key outcomes? How long before they see the outcomes? How can the outcomes be measured?
  □ How will they know it’s hurting?
    What are the potential side effects, including interactions, that may occur?
  □ When should the decision be re-evaluated?
• Consider own role re: follow-up, documentation, and additional decision support

Tips for Monitoring CAM Use

• Expected and unexpected side effects
  □ Adverse events reporting
    FDA MedWatch Program (1-800-FDA-1088)
• For how long and how often should the therapy be evaluated?
  □ Role of CAM practitioners and standard tests
  □ CAM use diary
• Caution re: using too many new therapies at one time
Evaluating the Decision
Assist Patients in Weighing Pros and Cons
• What is patient's overall objective?
• Potential benefits vs. risks
• What is unknown about a therapy?
Impact on quality of life, relationships, family dynamics, hope, and overall health
Ability to commit to a therapy or practice
• Time, cost, energy, etc.

And Finally…
Document, document, document!
Key Points
• Discussion focus: CAM therapy, efficacy, safety
• Information provided and referrals
• Assessment of patients’ understanding of risks and benefits
• CAM decision made, with follow-up plan
  ❏ Type/brand name with dosage
  ❏ CAM practitioner name and contact information
  ❏ Monitoring and evaluation plan

The Bottom Line
• CAM research is at a beginning stage and is always changing…patients and survivors need to stay current!
• You and your organizations have a role in helping patients make safe and informed CAM decisions
• Patients have the right to make what others may consider to be the wrong decision!
• Respectful communication is key

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THANK YOU!
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Bibliography and References


