Complementary Medicine Education and Outcomes (CAMEO) research program

A living laboratory focused on knowledge translation related to CAM and cancer:

- Support safe and informed CAM decision-making
- CAM education of patients, families, health professionals
- Facilitate new CAM research

The goal is to support individuals in making informed CAM decisions, not recommending or offering specific therapies.
Today’s Objectives

• Understand cancer survivors’ unique CAM needs and CAM therapy use

• Describe the challenges, issues and gaps in CAM survivorship care

• Identify strategies and resources for making safe evidence-informed decisions about using CAM

• Examine emerging evidence for common CAM therapies used by survivors
Survivor/Survivorship

“An individual is considered a cancer survivor from the time of diagnosis, through the balance of his or her life. Family members, friends, and care-givers are also impacted by the survivorship experience and are therefore included in this definition.”

Adapted from the National Coalition for Cancer Survivorship, Office of Cancer Survivorship, National Institutes for Health, USA
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 Centre for Complementary & Integrative Health (NCCIH)

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
Meet Robin

“Diagnosis”
Why does CAM matter?
The Gap

• Up to 67% of survivors use CAM after the completion of primary treatment

• Few discuss CAM use with their health care professionals (HCPs)

• Research has shown survivors, families and HCPs struggle with making safe and informed decisions about CAM.

Ben-Ayre et al., 2010; Bishop et al., 2011; Boon et al., 2007; Cassileth & Vickers, 2005; Fonnebo et al., 2007; Gozum et al., 2003; Kafke et al., 2012; Mao et al., 2008; Mao et al., 2011; Mayadagli et al., 2011; Molassiotis et al., 2005; Saini et al., 2011; Verhoef et al., 2005
Survivors’ Voices…

“I just realized that there was so much information about supplements that it was quite overwhelming… and a friend gave me a book, and if you did all the things in the book all you’d do all day is take pills with or without food… Who knows, maybe the answer is in there, but I had no way of weighing the benefits of any of these things first.”  
(ovarian cancer survivor)

“…there is no co-operation between complementary medicine and official medicine… there is sort of barrier between, and the information we have is only partial. It’s confusing…”  
(prostate cancer survivor)
When CAM is left out of standard cancer care…

Safety concerns

- Concurrent CAM with conventional treatment and/or chemoprevention
- “Silent” NHP use during clinical trials (Naing et al., 2011)
- Delay of conventional treatment/chemoprevention
- Physical, financial or emotional harm
- Decision distress, conflict, regret

Missed benefits

Trust & communication issues

Ben-Ayre et al. 2010; Fonnebo et al. 2007; Juraskova et al. 2010; Kim et al., 2008; O’Connor, et al., 2006; Rausch et al., 2010; Schofield et al., 2010; Tung et al., 2009; Verhoef et al., 2008.
Why is there a GAP?

- Blurring of paradigms
- State of CAM evidence
- Biomedical model dominance
- Survivors unsure/wary to disclose
- Health care professional education
- **Over $5.6 billion** spent out-of-pocket each year by Canadians on CAM
  
  (Fraser Institute, 2007)
Addressing the GAP: The CAMEO Program


www.cameoprogram.org
Education Programs

1. Patient/Family:
   Increased CAM knowledge and decision self-efficacy
   Decreased CAM decision conflict and distress
   Decreased polytherapy use of CAM

2. Health Care Provider:
   Increased CAM knowledge and attitudes
   Increased CAM practices
   • Provided CAM info, review/discuss evidence, document & monitor use

www.cameoprogram.org
CAMEO Decision Support Programs

1:1 Decision Support Coaching Intervention
- Increased CAM knowledge, decision confidence and preparedness
- Reduced decision conflict and distress
- Trends toward enhanced safe use of CAM
- Increased use of evidence based diet, exercise & lifestyle interventions

MyChoices Decision Aid – coming soon!
- CAM therapy use for hot flashes after treatment for breast cancer
- Acupuncture, black cohosh, soy
- Decreased decision conflict; increased CAM knowledge; increased use of soy and mind-body therapies

Balneaves et al. (in press). Assessment of information and decision support needs for managing hot flash symptoms after breast cancer. *Journal of Supportive Care in Cancer.*

CAM Decision Support Best Practice Guideline – coming soon!
- Evidence informed practice guideline for health care professionals to provide CAM decision support in the clinical setting
- BCCA and Cancer Care Manitoba
CAM USE BY CANCER SURVIVORS

Prevalence and Patterns of Use
Which Survivors are using CAM?

- Breast, prostate, gynae, colorectal, melanoma, lymphoma
- Advanced disease
- Younger
- Higher education
- Higher income
- Previous chemotherapy
- Unmet needs

Bell, 2010; Boon, 2007; Ernst & Cassileth, 1998; Humpel & Jones, 2006; Mao et al., 2007, 2008, 2011; Matthews et al., 2007; Shen et al., 2002; Sohl et al., 2013; Truant et al., 2013
Unmet Needs of Cancer Survivors (Campbell et al., 2011)

- Fears about cancer spreading: 16.2%
- Being told I had cancer: 15.0%
- Not feeling sure that the cancer has gone: 13.7%
- Feeling tired: 13.7%
- Find financial assistance*: 12.5%
- Feeling stressed: 12.3%
- Find information about CAM**: 12.0%
- Coping with bad memory, lack of focus: 12.0%
- Dealing with feeling worried (anxious): 11.9%
- Worry whether treatment has worked: 11.9%

* "Finding what financial assistance is available and how to obtain it
** CAM = complementary and alternative medicine
Survivors with unmet needs more likely to use CAM (Mao et al., 2008)

Table 3
CAM use by unmet needs among cancer survivors

<table>
<thead>
<tr>
<th>Therapies</th>
<th>With unmet needs (N = 418)</th>
<th>Without unmet needs (N = 196)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Reporting use</td>
<td>% Reporting use</td>
<td></td>
</tr>
<tr>
<td>Megavitamin</td>
<td>35.6</td>
<td>24.4</td>
<td>0.008</td>
</tr>
<tr>
<td>Natural products/herbs</td>
<td>29.7</td>
<td>19.4</td>
<td>0.01</td>
</tr>
<tr>
<td>Deep breathing</td>
<td>29.9</td>
<td>18.1</td>
<td>0.003</td>
</tr>
<tr>
<td>Meditation</td>
<td>23.6</td>
<td>10.7</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Massage</td>
<td>17.4</td>
<td>7.3</td>
<td>0.002</td>
</tr>
<tr>
<td>Chiropractic care</td>
<td>11.3</td>
<td>7.3</td>
<td>0.141</td>
</tr>
<tr>
<td>Guided imagery</td>
<td>8.4</td>
<td>2.8</td>
<td>0.019</td>
</tr>
<tr>
<td>Yoga</td>
<td>7.1</td>
<td>3.4</td>
<td>0.089</td>
</tr>
<tr>
<td>Acupuncture</td>
<td>3.1</td>
<td>0.6</td>
<td>0.07</td>
</tr>
<tr>
<td>Tai chi</td>
<td>2.6</td>
<td>0.6</td>
<td>0.145</td>
</tr>
<tr>
<td>Qi gong</td>
<td>1.5</td>
<td>0</td>
<td>NA</td>
</tr>
</tbody>
</table>

P-value was based on univariate logistic regression.
CAM: complementary and alternative medicine
## Types of CAM Use: Survivors
(Mao et al., 2011)

<table>
<thead>
<tr>
<th>Therapies</th>
<th>Ever Used</th>
<th>Used in Past 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cancer Survivor (%)</td>
<td>Non-Cancer Control (%)</td>
</tr>
<tr>
<td>Any CAM therapy</td>
<td>66.5</td>
<td>52.5</td>
</tr>
<tr>
<td>Alternative medical systems</td>
<td>15.5</td>
<td>11.2</td>
</tr>
<tr>
<td>Biologically based</td>
<td>36.8</td>
<td>29.2</td>
</tr>
<tr>
<td>Body based</td>
<td>41.8</td>
<td>31.4</td>
</tr>
<tr>
<td>Mind-body</td>
<td>32.0</td>
<td>25.5</td>
</tr>
<tr>
<td>Energy based</td>
<td>2.9</td>
<td>1.6</td>
</tr>
</tbody>
</table>
Reasons for CAM Use (Mao et al., 2011)

Abbreviations: CAM, complementary and alternative medicine
* Significant p-values (<0.05) by chi-2 test
Letting Providers know about CAM Use (Mao et al., 2011)

**Abbreviations:** CAM, complementary and alternative medicine
* Significant p-value (<0.05) by chi-2 test
LOCATING AND USING CAM EVIDENCE
What do we mean by evidence?

- Clinical trials
- Cohort studies
- Case control studies
- Case series
- Case reports
- Expert opinions
- Animal research
- In vitro — ‘test tube’— research

Systematic reviews, Meta-analyses
What’s wrong with a mouse?
Synthesis of CAM Evidence for Practice


www.Integrativeonc.org
Evidence-Based Clinical Practice Guidelines for Integrative Oncology: Complementary Therapies and Botanicals

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Key words: cancer, oncology, complementary and alternative medicine (CAM), complementary therapies, integrative medicine

The Society for Integrative Oncology (SIO) is an international organization dedicated to encouraging scientific evaluation, dissemination of evidence-based information, and appropriate clinical integration of complementary therapies. Practice guidelines have been developed by the authors and endorsed by the Executive Committee of the SIO. Guidelines are a work in progress; they will be updated as needed and are available on the SIO Web site (<http://www.integrativeonc.org/>).

Contents
- Executive Summary
- Methods
- Introduction
- Recommendations and Discussion
- Indications for Future Research
- Conclusions
- Summary of Recommendations
- References

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Executive Summary
In recent years, the term integrative medicine has gained acceptance in medical academia. The Consortium of Academic Health Centers for Integrative Medicine defines this term as “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 appropriate therapeutic approaches, healthcare professionals, and disciplines to achieve optimal health and healing.” Integrative oncology has been specifically described as both a science and a philosophy that focuses on the complex health of people with cancer and proposes an array of approaches to accompany the conventional therapies of surgery, chemotherapy, molecular therapeutics, and radiotherapy to facilitate health.

The SIO and its Medline-indexed journal (Journal of the Society of Integrative Oncology), founded by leading oncologists and oncology professionals from major cancer centers and organizations, promote quality research and appropriate application of useful, adjunctive complementary modalities...
The SIO Guidelines* recommend that all patients should:

- Be asked about the use of CAM
- Receive guidance about CAM in an open, evidence informed, and patient centered manner by qualified personnel
- Be advised to avoid therapies promoted as “alternatives” to mainstream care

*Deng et al., 2009
## Integrative Oncology Practice Guidelines

*(Deng et al., 2009)*

<table>
<thead>
<tr>
<th>RECOMMENDED</th>
<th>CAUTION</th>
<th>NOT RECOMMENDED</th>
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<tbody>
<tr>
<td>MIND BODY</td>
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<tr>
<td>Visualization</td>
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<td>Meditation</td>
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<td>Relaxation</td>
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<td>Biofeedback</td>
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<tr>
<td>Prayer</td>
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<tr>
<td>BODY BASED</td>
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<tr>
<td>Massage</td>
<td></td>
<td>Deep pressure massage near wounds or cancer lesions; or with bleeding</td>
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<td>Exercise</td>
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<tr>
<td>Diet</td>
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<tr>
<td>ENERGY THERAPIES</td>
<td>Acupuncture with risk of bleeding</td>
<td>Electrostimulation wristbands for nausea &amp; vomiting</td>
</tr>
<tr>
<td>Acupuncture</td>
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<td>Reiki</td>
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<td>Therapeutic Touch</td>
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</tbody>
</table>
| NATURAL HEALTH PRODUCTS | Evaluate dietary supplements and herbal products for side effects or potential interaction with other drugs | Those that are likely to interact with other drugs, should not be used:  
  During chemotherapy  
  During radiation therapy  
  Before surgery |
An Exception: Vitamin D

**Canadian Cancer Society** (2007)
- 1,000 IU of Vitamin D³ during fall/winter months for cancer prevention (adults)

**Optimal dose under review**

**Caution:** High doses may increase risk in pancreatic (Stolzenberg-Solomon et al., 2010) and advanced prostate (Ahn et al., 2008) cancer

**Role of Vitamin D in other chronic diseases** (Horlick, 2007; Zitterman, 2007)
- Cardiovascular, rheumatoid arthritis, multiple sclerosis, osteoporosis

(Updated May 31, 2016) https://www.mskcc.org/cancer-care/integrative-medicine/herbs/vitamin-d
“It appears to be a side effect of the herbal tea you're drinking.”
<table>
<thead>
<tr>
<th>Hormonal effects</th>
<th>Estrogenic: Black cohosh, flaxseed, ginseng, milk thistle, red clover</th>
</tr>
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<tbody>
<tr>
<td>Lower platelets or prolong clotting time</td>
<td>Androgenic: DHEA</td>
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<td>Lower platelets or prolong clotting time</td>
<td>Alfalfa</td>
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<td>Lower platelets or prolong clotting time</td>
<td>Chamomile</td>
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<td>Lower platelets or prolong clotting time</td>
<td>Garlic</td>
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<tr>
<td>Lower platelets or prolong clotting time</td>
<td>Red clover</td>
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<td>Liver injury and interfere with:</td>
<td>Kava</td>
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<td>Liver injury and interfere with:</td>
<td>Mistletoe (Iscador©)</td>
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<tr>
<td>Liver injury and interfere with:</td>
<td>Skullcap</td>
</tr>
<tr>
<td>Impact cytochrome P450 and drug metabolism</td>
<td>St. John’s Wort</td>
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<td>Impact cytochrome P450 and drug metabolism</td>
<td>Grapefruit</td>
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<td>Impact cytochrome P450 and drug metabolism</td>
<td>Milk Thistle</td>
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<tr>
<td>Impact cytochrome P450 and drug metabolism</td>
<td>Panax Ginseng</td>
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<tr>
<td>Impact cytochrome P450 and drug metabolism</td>
<td>Ginkgo Biloba</td>
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EMERGING NHP THERAPIES –
Ginger

- Antiemetic, antiplatelet, anti-inflammatory, antitumor effects

**What does the evidence tell us?**

- Chemo-induced nausea and vomiting:
  - 2/3 of Phase II/III RCTs showed positive effect of ginger plus 5-HT3 receptor antagonist anti-emetics (Hickok et al., 2007; Marx et al., 2013; Ryan et al., 2009; Zick et al., 2009)

- Beginning evidence demonstrating anti-tumor effects of ginger in lung, colorectal, breast, pancreas, ovarian (Kim et al., 2009, Pan et al., 2008; Rhode, 2007; Sung et al., 2008)

- Side effects: increase bleeding risk, reduce blood glucose

Pomegranate

- Active ingredients polyphenols; antioxidant and anti-inflammatory
- Possible chemopreventive effects in prostate cancer patients

**What does the evidence tell us?**

- Animal studies: inhibition of tumor growth & accelerated cell death (Albrecht et al., 2004; Malik et al., 2005)
- Mean PSA doubling time significantly increased (Paller et al., 2014; Pantuck et al., 2008)
- In-vitro inhibition of aromatase activity, limits breast cancer cell proliferation (Kim et al., 2002)
- No effect on postmenopausal hot flashes
- Exploring role in alleviating cisplatin-induced hepatotoxicity (Yildirim et al., 2013)

(Updated May 31, 2016) [https://www.mskcc.org/cancer-care/integrative-medicine/herbs/pomegranate](https://www.mskcc.org/cancer-care/integrative-medicine/herbs/pomegranate)
Turmeric (Curcumin)

- A tropical plant that is part of the ginger family.
- Anti-inflammatory, antioxidant, enhances apoptosis, cytokine release, anti-angiogenesis, anti-platelet
- Interferes with cytochrome P450 and other drug metabolism mechanisms

What does the evidence tell us?

- > 85 in-vitro and animal studies. Anti-proliferative effects in variety of cancers (uterine, ovarian, lung, colorectal, neuroblastoma, pancreatic, breast, sarcoma)
- Potentiates in-vitro anti-tumour effect of some chemo and radiation treatment in pancreas, colorectal, prostate, ovarian and cervical cancer (Bayet-Robert et al., 2010; Kunnynajjara et al. 2007, 2008; Qiao et al., 2012; Selvendiran et al., 2010; Sreekanth, et al., 2011; Tharakan et al., 2010)
- May inhibit cyclophosphamide & doxorubicin effect in breast cancer (Somasundaram, 2003)

(updated May 31, 2016)

https://www.mskcc.org/cancer-care/integrative-medicine/herbs/turmeric
Turmeric (Curcumin)

What does the evidence tell us, con’t?

• Small RCT showed efficacy and safety of turmeric for cachexia pre-treatment for colorectal cancer (He et al., 2011)

• Topical turmeric-based cream effective for radiation based dermatitis (Palatty et al., 2014)

Cautions:

• Increased bleeding risk
• Affects metabolism of concurrent drugs through a variety of mechanisms
• Can cause allergic dermatitis, gall stones, kidney stones

Coriolus Versicolor

- Also known as “cloud mushroom” or “turkey tail”
- Thought to be biologic response modifier
- Polysaccharides (PSK, PSP) stimulate immune function
- Is offered in Japan as a drug therapy in the form of PSK (“Krestin”)
- Used in TCM

What does the evidence tell us?

- Higher survival rates in gastric and colorectal cancer after PSK (Nakazato, 1994; Torisu et al., 1990)
- In vitro effects on leukemia and lymphoma cell death (Lau et al., 2004; Hirahara et al., 2012)
- Systematic review of PSK in lung cancer - may improve immune function, reduce tumor-associated symptoms, and extend survival (Fritz et al., 2015)
- No demonstrated effect in breast cancer

Side Effects: Few – darkening of fingernails and stools

https://www.mskcc.org/cancer-care/integrative-medicine/herbs/coriolus-versicolor
**Cannabis**

- Numerous active components - cannabinoids, with THC most widely recognized
- Potential benefits re: pain, appetite, nausea/vomiting & seizures

**What does the evidence tell us (re: antineoplastic)?**

- In vivo & in vitro/pre clinical studies – antitumor effects in glioma, hepatocellular, prostate, lung, cholangiocarcinoma, breast, melanoma (McAllister et al., 2006; Velasco et al., 2012; Rocha et al., 2014; Pourkhalili et al., 2013; De Petrocellis et al., 2013; Ramer et al., 2012; Leelawat et al., 2010; Qamri et al., 2009; Blazquez et al., 2009; Armstrong et al., 2015)

- Small Phase 1 study demonstrated safety of THC injected into recurrent GBM in 9 patients (Guzman et al., 2006)

- Combined treatment of THC with temozolomide resulted in cell death in mice models with gliomas (Torres et al., 2011).

Slide adapted from Dr. Lynda Balneaves (updated May 31, 2016)

Cannabis, con’t

- **Side Effects:** Psychoactive response, dry mouth, decreased psychomotor coordination, impairment of short term memory and concentration

- **Cautions:**
  - Impact on mental health and brain development in children < 25
  - Smoking = large airway injury
  - THC may promote cell growth in cancers without cannabinoid receptors (e.g., breast)
  - low dose cannabinoid was found in one study to lead to cancer cell proliferation....

Adapted from Dr. Lynda Balneaves (updated May 31, 2016)

http://www.ncbi.nlm.nih.gov/books/NBK65755/
Synthesis of Evidence: Cancer Prevention

Food, nutrition, physical activity and the prevention of cancer: Global perspectives (AICR/WCRF 2007)

- Be physically active for at least 30 minutes every day.
- Be as lean as possible without becoming underweight.
- Eat a variety of vegetables, fruits, whole grains, and legumes.
- Avoid sugary drinks. Limit consumption of energy dense foods
- Limit consumption of red meats and avoid processed meats.
- Limit alcoholic drinks to 2 for men and 1 for women a day.
- Limit consumption of salty and mouldy foods.
- Aim to meet nutritional needs through diet alone
- After treatment, survivors should follow the diet, healthy weight and physical activity recommendations for cancer prevention.

www.dietandcancerreport.org
“Run from salad bar to salad bar”

[www.dietandcancerreport.org](http://www.dietandcancerreport.org)
Why don’t we talk about CAM with patients and families?

“You’ve been fooling around with complementary medicine again, haven’t you?”
Barriers to Communication

- Lack of HCP CAM education and decision support skills
- Lack of time
- The culture of cancer care
- Attitudes towards CAM
- Specialization
- Uncertainty re: scope of practice

Davis et al., 2012; Frenkel et al., 2010; Rojas-Cooley & Grant, 2009; Schofield et al., 2010; Tovey & Broom, 2007
Guiding Principles

• survivor’s right to make informed choices
• do no harm
• evidence-informed
CAM and Cancer Decision Making

Shared Decision-Making (SDM)

An integrative process between patient and clinician that:

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

What does a “good” decision look like?

Good Decision = Informed Decision
CAM & the Health Professionals’ Role

- Open the dialogue

- Understand the survivor’s:
  - Goals, beliefs and values related to CAM use
  - Preferences for decision-making roles (self and others)

- Assess foundational lifestyle practices & knowledge
  - Diet, exercise, weight maintenance, sun safety, smoking cessation, sleep

- Help locate and communicate evidence-informed CAM information in an unbiased and non-judgmental fashion

CAM & the Health Professionals’ Role

• Help select a quality CAM therapy that may address the survivor’s goals

• Help select CAM provider
  • Credentialing; licensure; education

• Help devise a monitoring plan
  • efficacy (does it work?)
  • toxicity (does it hurt?)
  • Is it meeting the patient’s objectives?
  • Who else needs to be involved?

CAM RESOURCES FOR PATIENTS AND HEALTH CARE PROVIDERS
CAMEO Website

www.cameoprogram.org
Credible CAM Websites

• Memorial Sloan Kettering Cancer Centre Herbs and Botanicals Database
  • Cancer specific CAM therapy monographs
  • App available

• Natural Medicines
  • Natural health product & dietary supplement monographs

• CAM on Pubmed
  • Newly published articles about all CAM therapies
  • App available

www.cameoprogram.org
Other CAM Websites

• Natural and Non-Prescription Health Product Directorate (NNHPD)
  • Database of NHPs assessed by Health Canada
  • Identify advisories of unsafe products
  • Report adverse events (MedEffect)

• National Center for Complementary and Integrative Health (NCCIH - formerly NCCAM)
  • Ask/Tell Program
  • Educational resources

• ClinicalTrials.gov
  • Search for CAM clinical trials

www.cameoprogram.org
Online Patient and HCP education modules
CAM & Cancer in Canada Booklet
CCS Complementary Therapies Booklet
CAM diary
SCOPED tool
NHP and breast cancer monographs
Natural health product decision aid – soon!
CAM Best Practice Guideline – soon!
Healthy Living Resources
Other Resources

- Library and Cancer Information Centers
- Oncology nutrition services
  - Dial-a-dietitian 811
- Drug information specialist 1-800-663-3333, 6275
  - Drug- NHP interactions
- Patient & Family Counseling
  - Be Active
  - Support groups
  - Relaxation
  - Mindfulness Meditation Program
  - Art therapy (children)
DECISION COACHING
SCOPED Framework

- Situation
- Choices
- Objectives
- People
- Evaluation
- Decision

SCOPED: An Example

• Kathryn Bright
SCOPED: Situation

Kathryn is a 40 year old woman who completed treatment 2 months ago for stage III breast cancer. She underwent a mastectomy with node dissection (3 positive nodes), completed 6 cycles of fluorouracil, epirubicin & cyclophosphamid (FEC), and has begun to take Tamoxifen. In the past month, she has experienced hot flashes, severe fatigue, and is having difficulty caring for her 12 year old son and keeping up with her part-time work at a local art studio. She shares: “I’m so tired all the time I just don’t want to get out of bed. I don’t want to do anything…and these hot flashes are unbearable…”
SCOPED: Situation

Her partner, David Liu, has been spending a lot of time looking up information on the internet and has identified 2 CAM therapies that he thinks may help Kathryn with her fatigue and hot flashes: acupuncture and DHEA. From what he’s read online in cancer chat rooms, these therapies seem to have helped other women and “seem a no-brainer” as they are less toxic than drugs such as Tamoxifen. His past use of acupuncture has also convinced him of the possible benefits of this therapy. David has brought in a large stack of web pages about these therapies and wants to talk to you about them.

Questions:

• Will acupuncture and DHEA help Kathryn’s fatigue and hot flashes?
• Is it safe to use DHEA concurrently with tamoxifen?
SCOPED: Choices

- Acupuncture
- DHEA
SCOPED: Objectives

- Minimize fatigue
- Minimize hot flashes
- Safe use of DHEA during Tamoxifen
SCOPED: People

- Husband
- Others?
SCOPED: Evaluation

Acupuncture

• Regulates the flow of ‘qi’ (vital energy)
• Needle, heat, or pressure stimulation on certain points on the body
• Causes nerve cells to release neurotransmitters, affects the pituitary gland, and changes function in parts of the brain
• Influences blood pressure, immune system, and endorphin release
• Use cautiously in neutropenic and thrombocytopenic patients

State of Science

Recommended:
• Poorly controlled pain, nausea and vomiting with chemo or surgery
• Acupressure wristbands on day of chemo for nausea & vomiting
• For hot flashes not amenable to pharmacologic treatment.
• Radiation-induced dry mouth

Caution: More clinical studies needed to confirm benefit in:
• Shortness of breath, fatigue, neuropathy.

THAT'S ODD... MY NECK SUDDENLY FEELS BETTER...

EARLY ACUPUNCTURE
**SCOPED: Evaluation – DHEA** (*dehydroepiandrosterone*)

- Hormone secreted by the adrenal gland and converted into testosterone and estrogen in body
- DHEA extracted from a wild yam plant is available as a dietary supplement
- Alters activity of cytochrome P-450 enzyme: alters drug metabolism
- Side Effects: Acne, increased facial hair, alopecia, alters blood sugar regulation.

**State of the Science**

- One case study showing cancer progression in man with advanced prostate cancer
- In premenopausal women, may increase the risk of breast, uterine and ovarian cancer
- Enhances Tamoxifen resistance and disease progression in breast cancer

(Updated May 31, 2016) [https://www.mskcc.org/cancer-care/integrative-medicine/herbs/dehydroepiandrosterone](https://www.mskcc.org/cancer-care/integrative-medicine/herbs/dehydroepiandrosterone)
SCOPED: Evaluation Tips

Weighing the Pros and Cons

- Need to consider:
  - Survivor’s overall objective?
  - The potential benefits vs. risks
  - What is unknown about a therapy

- Impact on quality of life, relationships, and overall health

- Ability to commit to a therapy or practice
  - Time, cost, energy, etc.
### SCOPED: Evaluation

<table>
<thead>
<tr>
<th>Kathryn</th>
<th>Acupuncture</th>
<th>DHEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimize fatigue</td>
<td>✔️</td>
<td>?</td>
</tr>
<tr>
<td>Minimize hot flashes</td>
<td>✔️</td>
<td>?</td>
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<tr>
<td>Safety</td>
<td>✔️</td>
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**SCOPED: Decisions**

<table>
<thead>
<tr>
<th>Decision</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>To minimize fatigue</td>
<td>Acupuncture</td>
</tr>
<tr>
<td>To minimize hot flashes</td>
<td>Acupuncture</td>
</tr>
<tr>
<td>Safe CAM use</td>
<td>Acupuncture</td>
</tr>
</tbody>
</table>

Will discuss other options to safely manage hot flashes and fatigue with oncology nurse, doctor, pharmacist and dietitian

Will refrain from DHEA
SCOPED: Monitoring & Evaluating the Decision

- Effectiveness – is the therapy “working”?  
  - Consider survivor’s goals  
  - Indicators?

- Expected and unexpected side effects  
  - Safety indicators?  
  - Adverse reaction reporting:  
    - Natural Health Product Directorate (NHPD)  

- How long and often should the CAM be evaluated?

- Caution about using too many new CAM at one time
Robin’s Story
Robin’s Story

Be careful about reading health books.

You may die of a misprint.

~ Mark Twain ~
Robin’s Story

Life is measured by the number of breaths we take, but by the moments that take our breath away.

~ Maya Angelou ~
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Discover Our Story

www.abreastinaboat.com
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You miss 100% of the shots you never take.

~ Wayne Gretsky ~
Robin’s Story

New beginnings are often disguised as painful endings.  
-Lao Tzu
Summary

- Up to two-thirds of survivors use CAM after primary treatment.
- Among survivors, the highest CAM users have unmet needs, are younger, female, higher SES, previous chemotherapy use, breast cancer.
- NHPs are the top CAM therapies used by survivors.
- Gaps exist in supporting survivors to safely use CAM.
- A growing body of evidence is available to offer support for evidence-informed CAM use.
- Health care providers do have a role in helping survivors and their families make safe and informed CAM decisions.
- Resources exist to support survivors, families, and health care providers in making safe and informed CAM decisions.
Looking to the Future

Practice
- Models of care
  - promote HEALTH
  - assess for CAM use and provide decision support throughout cancer trajectory
- Integrate CAM clinical practice guidelines; decision aids; clinical tools
- Provide/referral to evidence-based CAM therapies
- Access to CAM expertise – telephone, on-line

Education
- Survivors/families - “CAM basics”
- HCPs – Undergraduate education includes CAM
- Policy makers – patient and economic outcomes; satisfaction with care

Research
- Evaluate PROMs/PREMs, economic and system impacts with CAM integration
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  - University of British Columbia Four-Year Graduate Fellowship
  - CIHR Psychosocial Oncology Research Training (PORT) Fellowship
  - Canadian Nurses Foundation TD Meloche Monnex Scholarship
Select References


Select References, con’t


• Mao et al., (2008). Cancer survivors with unmet needs were more likely to use complementary and alternative medicine. Journal of Cancer Survivorship, 2, 116-124.


Robin’s Story –

A few favourites:


Thank You!

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