Cancer Associated Side Effects: Complementary and Alternative Methods for Relief

Don S. Dizon, MD, FACP
Director, Oncology Sexual Health Clinic
Gillette Center for Women’s Cancers
Massachusetts General Hospital Cancer Center
Scope

• Living beyond breast cancer:
  – Approximately 220,000 diagnosed each year
  – Living with breast cancer: Almost 3 million

• Breast cancer is not one cancer
  – Genomic characterized subtypes
  – Prognosis is variable
    • HR-positive have a great prognosis
    • HER2-positive do well with use of adjuvant trastuzumab
    • Triple-negative: High risk of recurrence within first 3-5 years
    • Risk factors for recurrence: Large tumor, node involvement, High recurrence score among others
Symptoms can come from various places

Due to the diagnosis:
- Fear of recurrence
- Fear of death

Due to treatment:
- Hot flashes
- Fatigue
- Depression
- Insomnia
- Sexual dysfunction
Where to turn

- “Western” medicine
- Complementary care
- Alternative treatment
- Family and friends
- Spirituality and Religion
- Community

Image: www.mattstone.blogs.com
Complementary and Alternative Medicine (CAM)

• CAM therapies common
  – 50-70% use
• Most patients do not discuss

• Complementary versus Alternative:
  – “Complementary” = adjunctive treatments
  – “Alternative” = treatment used independent of traditional medicine
CAM: Questions to consider

• What does it do?

• WHY would it do this?
  – Interventions informed by theory are more effective than those that lack a theoretical basis

• Is there any evidence it works?
  – Who is judge of the evidence? YOU ARE

• What are the RISKS?
  – Nutrition aides

Glanz K and Bishop DB. Ann Rev Pub Health 2010
Theoretical considerations

• Social Cognitive Theory – Self-Efficacy
  – Informs one’s confidence in performing a specific behavior

• Integrative Medicine Theory –Combining therapeutic modalities into a coherent protocol aimed at “healing” the whole
MODALITIES IN CAM
Accupuncture

Needles, pressure, or heat at accupuncture points

Traditional Chinese medicine

Based on belief in QI (vital energy) that travels along meridians

QI affects the spiritual, emotional, mental and physical condition

http: www.cancer.gov/cancertopics/pdq/cam/acupuncture
Accupuncture

• What the “evidence” suggests:
  1. Accupuncture can alleviate pain as an adjunct to pain medications
  2. Compared to sham technique, accupuncture helped treat pain associated with Ais
  3. It can help reduce nausea and vomiting due to cancer therapy
  4. It can help reduce hot flashes, improve sleep, and reduce depression

Nutrition

• Three A’s:
  – **Anti-inflammatory:** Omega 3 fatty acids
  – **Anticarcinogenic:** tomatoes, saffron
  – **Antioxidants:** Pomegranate, red grapes, red wine, berries

• Rationale: Food enhances the immune system
Nurses Health Study

• Observational study

• 1999 analysis: 1982 women with BC.
  – No effect on outcome based on intake of fruit, red-meat or grain. BUT: Women with MBC had lower mortality rate with vegetables, carotenoids, fiber intake

• 2005 analysis: 2619 women with BC.
  – No effect on mortality

Women’s Healthy Eating and Living Study

• 2005 report: 205 women with Recurrent BC
  – Increased risk of BC with lowest intake of carotenoids

• 2007 report: Compared to intervention to observational groups followed for 7 years:
  – No change in risk of BCE (17% in each, HR 0.96)
  – No change in death (10% in each, HR 0.91)

Women’s Interventional Nutrition Study

- Postmenopausal women with newly dx BC (n=2437)
- Intervention: reduction of fat intake to 15% of energy
- Results:
  - Lowering fat intake associated with lower risk of BCE (10 versus 12%, HR 0.76, 95% CI 0.60-0.98)
    - ER negative cancer: HR 0.58, 95% CI 0.37-0.91
    - ER positive cancer: HR 0.85, 95% CI 0.63-1.14
  - No difference in Overall survival

Exercise and Fitness

• Improves QOL
• Systematic review:
  + General QOL
  + Breast cancer-specific QOL
  + Improved cardiorespiratory fitness
  + Improved physical functioning
  + Improved fatigue
? Improvement in survival

Mind-Spirit Interaction

• Multiple modalities:
  – Meditation
  – Yoga
  – Tai-Chi
  – Biofeedback

• Rationale: The mind can be used to influence health

• Impact on survival?

Mind-Spirit Interaction: Impact on Survival?

• Maybe... One observational Study from the Block Center for Integrative Care:
  – Profiled 90 patients (Median age, 46)
  – Treatment: Nutrition, fitness, and mind-spirit instruction
  – Median survival 38 mos (95% CI, 27-48)
  – 5-year SR: 27% (Control patients, 17%)

APPROACHING SYMPTOMS
Hot Flashes

- Can interfere with daily function, quality of life, and sleep
- Side effect of medical therapies
- May be exacerbated by outside factors: stress, spicy food, alcohol, smoking, inactivity
Hot Flashes

• Medications:
  – SSRI antidepressants: Venlafaxine (61% reduction vs 27% with placebo)
  – Gabapentin: Dose 900mg/day

• Accupuncture: May be effective but studies not consistent

• Hypnotherapy: May be as effective as gabapentin

• Yoga: Sustained relief shown in a small study

Hot Flashes

• Stellate Ganglion Block
  – Requires OR: Injection into the AL aspect of transverse process of C6
  – Proof of success: temporary Horner’s sign
• Pilot study of 34 patients
• Results:
  – 64% improvement in hot flashes at week 1
  – 1.7% increase in severity per week after
  – Overall estimated benefit: 47% decrease at 24w
  – Also noted: Improvement in sleep quality (4-fold improvement at week 24)

Cancer-Related Fatigue

• Definition: Unrelenting sensation of tiredness
  – Disproportionate to level of activity
  – Unrelieved by sleep or rest
  – Physically debilitating

• Most prevalent symptom related to Cancer
  – Affects 30-90%+ during treatment
  – 20-40% still affected after treatment

Cancer-Related Fatigue

• Medical interventions are limited:
  – Methylphenidate not effective vs placebo
  – Erythropoietin stimulating agents

• CAM:
  – Exercise
  – Acupuncture
  – Acupressure
  – Massage

Cancer-Related Fatigue

• Medical interventions are limited.

• Methylphenidate: Opioid-induced sedation and cognitive dysfunction. ??Fatigue
  – Bruera, et al: RCT of four interventions:
    • N= 140 participants with advanced cancer and fatigue score of 4 or higher on screening
    • Methylphenidate (MP) plus nursing telephone intervention (NTI)
    • Placebo plus NTI
    • MP plus control telephone intervention (CTI)
    • Placebo plus CTI

Cancer-Related Fatigue

• Bruera, et al: RCT of four interventions:
  – Telephone interventions:
    • Nursing telephone intervention (NTI) – Call by RN, standardized for content and duration including:
      – Symptom assessment
      – Review of medications
      – Psychosocial support and patient education
    • Control telephone intervention (CTI) – Call by non-professional
      – No psychosocial support or patient education

Cancer-Related Fatigue

- Bruera, et al: RCT of four interventions:
  - Results:
    - Median age, 58; 67% women
    - Fatigue scores improved at day 15 in all subgroups
    - None of the interventions were significantly better than placebo

Pain

• Affects over 70% of people living with advanced disease

• Different forms:
  – Nociceptive
  – Neuropathic
  – Visceral

• Treatment must be multidisciplinary
Managing Pain

• Western medicine:
  – Neuropathic pain: Tricyclic antidepressants, Anticonvulsants (ie, gabapentin), topic anesthetics, Opioids
  – Nociceptive pain: Anti-inflammatory agents, Opioids, Bisphosphonates (bone)

Opioids are important but are NOT an answer by themselves
Insomnia

• Affects up to 75% of population
• Two types:
  – Difficulty falling asleep
  – Difficult staying asleep
• Western medicine: Cognitive behavioral therapy, sleep hygiene, Benzodizepines, Benzodiazepine receptor agonists
• CAM: Mindfulness, Yoga, Exercise, Massage
• Valerian officinalis: No effect seen in a randomized trial

Insomnia

• Sleep Hygiene = Bedroom ONLY for sleep and sex
  – Component of cognitive behavioral therapy in studies
  – Results suggest it can improve insomnia and other issues (fatigue, anxiety, depression, QOL)

Dyspnea

• Usually not a symptom of lung metastases
• Dyspnea = shortness of breath (as perceived)
  – Chest tightness, Air hunger, suffocations, breathlessness
• Cancer involving pleura or lymphatic channels can cause dyspnea
• Western medicine: Opioids (relieves dyspnea)
  – Oxygen?
• CAM: Relaxation, Re-training
Nausea and vomiting

- Multifactorial etiologies
- Affects up to 30 and 60% of population
- Western medicine:
  - Target CNS: dexamethasone
  - Chemotherapy-related: serotonin 5-HT$_3$ receptor antagonists, substance P/neurokinin receptor antagonists
  - Bowel-associated: metoclopramide, lorazepam, octreotide
Distress

- Can manifest physically and psychologically
- Very much real
- Subjective level of distress is the primary impetus for treatment
- Treatments:
  - Medications (Anxiolytics, Antidepressants)
  - Psychological support and counselling
  - Mind-body interventions
  - Exercise
Conclusions

Symptoms during and following treatment are common, but can be treated.

The options range from medication, medical therapies, and includes complementary and alternative approaches.
Conclusions

Rule of thumb: If no theoretical risk, not financially burdensome, and you are interested, we should keep an open mind.

Patients living beyond breast cancer should be informed about choices, but be cautious of where your information is coming from.
Conclusions

“We're just people. Cancer doesn't convert us into saints, martyrs, heroes, precious baby-dolls, or pity receptacles. We're just people.”