Surviving (& Thriving) during & after cancer

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What is Integrative Oncology?

CAM

Oncology
(Cancer treatment)

Patient & Family

What is integrative medicine?

Patient

Conventional Oncology

Native Healing

Naturopathic medicine

Nutrition

Acupuncture
Integration = Communication

Goals of integrative treatments

- Increase tumor kill from any treatment
- Reduce Side effects of any treatment

Supporting Chemotherapy

- Meta-analysis of 21 clinical trials found combining melatonin with chemotherapy decreased 1 yr mortality, and reduces asthenia, leukopenia, nausea, vomiting, thrombocytopenia. RR of 1 yr mortality was 0.63.  
- Adding 20 mg melatonin to standard therapy for stage 4 cancer doubled response to tx and doubled survival at 1 yr  
  Eur. J. Ca 1999;35:1688

Supporting Chemotherapy

- VITAMIN D
  - Pretreatment with 1,25 dihydroxy vitamin D led to approx 75% enhancement of action of dox against ca cells.  
    (Ca Res. 1999;59:862)
  - Improving vitamin D levels significantly improved outcomes and survival in lymphoma pts receiving R-CHOP chemotherapy  
    (ASCO 2013 -post 103)
  - Enhances response to taxotere in advanced prostate cancer (ASCO 2002)
Supporting Cancer Care

- At least 5 studies show Ashwaganda to increase benefits of radiation therapy
- A mouthwash made from Yarrow helped chemotherapy-induced mucositis more than the usual formulation

Safe, basic support during most chemotherapy

- Melatonin
- Vitamin D
- Glutamine
- Fish oil
- Multivitamin
- Green tea
- Vit. C & Immune support

Goals of integrative treatments

- Increase tumor kill from any treatment
- Reduce Side effects of any treatment
- Inhibit metastasis (distant spread)
- ID & correct tumor “drivers”
- Improve immunity
- Improve overall health
- Long term secondary prevention

Aftercare - (Surviving & Thriving)

- Prevent return of original cancer
- Prevent other types of cancer
- Prevent or tx long term effects of cancer treatment
- Identify individual risk factors
- Overall wellness promotion
- Health, Happiness, Balance
Take Home Tip #1
If you need cancer treatment, integrative medicine can improve:
- response to treatment
- quality of life
- survival.

What is cancer?
Current View of Cancer Progression

Another Way of Thinking
- Cancer is a defect in regulation
- Cancer cells are mostly normal
- The imbalance is potentially reversible
- Using killing strategies alone may be counterproductive
- Host response is critical
- Cancer growth rates are variable, depending on the regulatory balance

ref: Schipper et al J. Clinical Oncology 1995;13:801
More good news

The environment surrounding a tumor cell can promote or discourage tumor growth independent of tumor genetics (Tumor suppressor or promoter genes)

Int. J. Cancer 2003;107:688
JNCI 2002;94:1494

Role of chronic inflammation in cancer development

- Microbial pathogens
- Environmental exposure
- Dietary lifestyle
- Therapy induced

Tumor Development
- Cell transformation
- Primary growth
- Metastasis

Chronic inflammation initiates and impacts all major stages of tumor progression, from cell transformation to widespread metastasis.
Inflammation & Cancer

Aspirin & breast cancer
JCO 2010

Curcumin

How aspirin works

Membrane Lipid (Phosphatidylycholine)

Phospholipase A2

Cyclooxygenase

Aspirin, NSAIDs

Arachidonic Acid

Endoperoxides

Prostaglandins (PGE, PGF)

Thromboxane

Prostacyclin

Corticosteroids

How curcumin works
Take Home Tip #2

- Cancer Biology is extremely complex.
- No simple answers
- Natural therapies can modify multiple steps in cancer growth.
- Bonus tip: To reduce inflammation throughout the body - use curcumin
Obesity, insulin & cancer

• Obesity could account for 14% of all cancer deaths in men and 20% in women (NEJM 2003;348:17)

• High insulin may be the best predictor of whether a woman’s breast cancer recurs. (JCO 2002;20:42)

• 60% higher risk of colon cancer with higher levels of insulin. 90% increase with highest waist circumference (JNCI 1999;91:1147)

Nature Medicine

• Rather than trying to cure cancer by killing off every last cell, it makes more sense to control the disease by modifying factors which control cancer growth (Lancet 1996;348:1149)

Take Home Tip #3

Change the environment that supports cancer cell growth, and you change the outcome
Protein

- Animal sources: Fish, eggs, free range poultry, non-fat yogurt, venison, bison
- Plant sources: Beans, peas, lentils, soy, quinoa, barley, protein powders, nuts and seeds,

Walnuts & Cancer

Reiter et al. 2013, Cancer Investigation
Does diet really matter?

- Mice were injected with an aggressive mammary tumor and then placed on three diets.
- After 70 days:
  - 33% of mice on high sugar diet were alive.
  - 67% of moderate sugar diet mice
  - 95% of low sugar diet mice were alive.

Alcohol & Cancer

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<th>Type</th>
<th>Cancer</th>
<th># studies</th>
<th>% increase per drink</th>
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<tr>
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Take Home Tip #4

- Eat Half your plate as vegetables
- Eat a rainbow of foods
- Eat locally, organically and in season (when possible)
- Beans = inexpensive healthy protein
- Eat Nuts
Vitamin D

- **Reduces cancer rates at 16 sites** (Antica. Res. 2006;26:2687)
- **Lower Vitamin D is associated with more aggressive prostate cancer** (JCO 2016)
- **Vit. D reduces rates of breast cancer**

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Herbs for Wellness

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<th>Herbs &amp; Immune Support</th>
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<td><img src="herbs-immune-support.png" alt="" /></td>
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- **Cancer treatments, (even surgery) reduce immune function** (Brjt. Ca 2007:97:105)
- **Supporting immunity improves survival in many cancers**
Mushrooms

- Mushrooms do not kill tumors directly but act through the immune system (Appl Microbiol Biotechnol 2002;60:258)
- Reishi suppresses growth of breast cancer cells by reducing inflammation (Nutr Cancer 2004;49:209)
- Coriolus (turkey tail) stimulate NK cells

Astragalus

- Red blood cell tonic
- Enhances activity of white blood cells.
- Increases NK cell activity

Take Home Tip #5

- Take vitamin D for health
- Support immunity with mushrooms, echinacea, & astragalus
- Drink green tea
Putting it all together

- Don’t smoke
- Avoid risky behaviors
- Healthy Diet
- Alcohol in moderation, (if any)
- Stay Active
- Maintain Healthy weight
- Take time for fun
- Sleep
- Take high quality vitamins
Putting it all together

- Simple changes like getting enough sleep can make everything work better
- Where you spend your mental and physical focus affects your health
- Take time for fun, laughter, joy, friends & family
- Give back to your community and family
- Live in accordance with your inner values
- Get out into nature