Naturopathic and Integrative Oncology

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Washington DC
Dr. Deirdre Orceyre
Who Am I?

★ Naturopathic physician and licensed practitioner of Chinese medicine
  ○ 6 years of naturopathic & Chinese medical school
  ○ 2 years naturopathic residency
★ Trained in primary care
  ○ Laboratory diagnosis, Physical exam
  ○ Prescription drugs, Minor surgery
★ General practitioner of holistic medicine
  ○ Nutrition, lifestyle, botanicals, homeopathy, supplements,
    flower essences, manipulation, exercise, acupuncture
★ Specialization in naturopathic integrative oncology (OncANP, SIO)
★ Over 10 years in clinical practice working with all types, all stages of cancer patients
★ 10 years at the GW Breast Center
★ Adjunct faculty at Georgetown University
No Financial Disclosures
Tonight’s Agenda

• Philosophy
• Definitions
• Treatments
• Resources
• Questions
Philosophy
Patient centered care - **you are in the center** of all providers (this is far from perfect in our system)

**Individualized** treatment - what YOU need, different from anyone else (your habits, your strengths, your challenges, your unique needs)

**Whole person** focus - not splitting you into pieces, including mind-body-spirit
Tumour Based Model

Tumour

- Surgery
- Chemotherapy
- Radiation

Person Based Model

SELF

- Immune Enhancement
- Prayer
- Healthful Diet
- Meditation
- Vitamins & Supplements
- Emotional Support
- Exercise
- Stress Reduction
- Avoidance of Toxins

Source - Dr. Neil McKinney
http://vitalvictoria.ca/
Paradigm Shift

Old model - disease as enemy, “war”
New model - body as friend with wisdom
Healthy Terrain
Foundations of Healing

Modified Maslow’s Heirarchy

Conventional Medical Therapies
Complementary Therapies
Botanicals, Vitamins and Supplements
Sleep, Rest and Relaxation
Exercise
Healthful Water
Healthful Diet
Avoidance of Physical Toxins
Stress Reduction
Emotional Connection with Others
Mind-Body Awareness
Personal Autonomy
Spiritual Connection
Hope
Will to Live

Source - Dr. Neil McKinney  http://vitalvictoria.ca/
Beware of “Green Allopathy”
Definitions
NEW TERM - Naturopathic Medicine

- A distinct primary health care profession emphasizing education, prevention, treatment and optimal health of mind, body and spirit.
- NDs provide evidence-informed natural and supportive therapies which complement standard of care medicine.
- Therapeutic care varies by state and territory and may include acupuncture, botanical medicine, physical medicine, clinical nutrition, homeopathy, lifestyle counseling, intravenous therapies and/or prescription drugs.
NEW TERM - Naturopathic Medicine
Naturopathic Medicine Provides Whole Person Care

• Naturopathic medicine includes the following concepts:
  • **State of health is inseparable from body, mind, spirit & environment.**
  • The body has an **inherent ability to heal** itself (vital force).
  • **Lifestyle** factors contribute to health and illness.
  • Every **individual** is biochemically unique.

• NDs take time to listen and engage with patients.

• Patients are educated to take an active role in their healing process.
  • "Self-care" through lifestyle based interventions is encouraged.
Naturopathic Philosophy

- The Healing Power of Nature
  *(vis medicatrix naturae)*

- Identify and Treat the Cause
  *(tolle causam)*

  - First Do No Harm
    *(primum no nocere)*

- Treat the Whole Person
  *(in perturbato animo sicut in corpore sanitas esse non potest)*

- Physician As Teacher
  *(docere)*

- Prevention
  *(principii obsta: sero medicina curatur)*
NEW TERM - Naturopathic Medicine
Education and Training of Naturopathic Doctors

• A Naturopathic medicine degree requires:
  • 4 years pre-medical undergraduate studies.
  • 4-5 years professional studies at federally recognized and regionally accredited Naturopathic Medical School.
  • Clinical training and Naturopathic Physicians Licensing examinations.
  • Post graduate residency programs available.
  • Doctoral degree confers Naturopathic Doctor or “ND” designation.
NEW TERM - Naturopathic Medicine
What Happens in a Typical ND Visit

Initial consultation:

➢ varies in length among practitioners and may be up to 90 minutes.
➢ includes medical history, review of previous laboratory, pathology and imaging reports, and patient assessment. Indicated lab tests may be ordered.
➢ Treatment plan is personalized may consist of nutritional guidance, vitamins and herbs, recommendations for therapeutic lifestyle changes
➢ May include referrals to other providers.

Follow-up visits: Patients typically return for 30-60 minute visits as needed.
NDs answer questions about natural therapies, discuss patients’ goals and provide education about conventional and natural treatments.

Naturopathic consults include review and assessment of:

- Terrain: inflammation, digestion, elimination, nutritional status, blood sugar control, stress, fitness, sleep, immune function, risk factors, mental emotional status, and disease status.
- Current records: labs, imaging, surgical, radiation and medical oncology reports.
- Prescription medications & supplements in use: to avoid possible interactions with any natural health product & ensure safety.
New Term - Integrative Medicine (IM)

Multiple meanings

- New term for CAM, different but includes CAM
- Integrating conventional and CAM therapies
- Integrating different complementary therapies
- Integrating the whole person
- All providers integrating care together (an ideal!!)
What are Naturopathic and Integrative Oncology?

• **Naturopathic Oncology** is the application of the art and science of Naturopathic medicine to the field of cancer care and treatment.

• **Integrative Oncology** is a combination of conventional cancer treatment with natural and supportive therapies

• **Both Naturopathic and Integrative Oncology**
  - Are a collaboration between multi-disciplinary health care providers to best support optimal health: physically, mentally and emotionally at diagnosis, during active treatment and post-treatment
  - Advise on safe, effective use of natural and supportive therapies combined with conventional treatment

• Surveys estimate that **greater than 80%** of people with cancer use natural medicine.

Goals of Naturopathic & Integrative Oncology

- **Improve lingering side effects** of conventional oncology treatment
  - Fatigue
  - Neuropathy
  - Hot flashes
  - Insomnia
  - Digestive effects
  - Anxiety/worry
  - Surgical site pain, scarring or other difficulty

Photo Credit: © Vadymvdrobot | Dreamstime.com
Cancer patients are particularly vulnerable to false claims of natural cancer cures.

Patients often get their information from health food store clerks and well-meaning friends and family.
Goals of Naturopathic & Integrative Oncology

- Make sure there are no interactions with any prescribed medications
- Strengthen secondary prevention (prevent recurrence), support immune system
- Prevention of other diseases
- Guidance on what you hear/read about different supplements, diets, etc
- Long-term wellness optimization, improve quality of life
Goals of Naturopathic & Integrative Oncology

Creating a **SAFE STRONG INTEGRATED PLAN** using safe, effective integrative therapies

Photo Credit: http://www.warrickandboyn.com
Naturopathic and Integrative Oncology

• **Supporting conventional care**
  (surgery, chemo, radiation, hormonal treatments, targeted therapies, immunotherapy)
  • Before treatment
  • During treatment
  • After treatment

• **Providing support for the body’s terrain**
  • Gastrointestinal system (digestion, absorption, elimination, GALT)
  • Immune system
  • Detoxification & elimination of toxins (liver, colon, skin, lungs, kidneys, intracellular, lymphatic)
  • Hormonal balance and elimination
  • Nervous system (mood, cognition, fight/flight, mind-body)

• **Adjunctive natural anti-tumor agents**
Treatments
Naturopathic and Integrative Oncology

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• Adjunctive natural anti-tumor agents
Supporting Conventional Care

- **Surgery**
  - Eliminating any supplements that may interfere with anesthesia or affect clotting/bleeding (eg St. John’s Wort, high dose fish oil or garlic or vitamin C)
  - Supporting body’s healing capacity – protein, bromelain, zinc, probiotics, multivitamin, homeopathics (eg arnica)

- **Radiation**
  - Supportive care for side effects – fatigue (American ginseng), anorexia, burns (aloe), cardiomyopathy (CoQ10, L-carnitine)
  - Making sure evidence indicates safety for concurrent use of supplement recommendations during radiation
Supporting Conventional Care

• Chemotherapy/radiation/hormone txs/small molecule/immunotherapy
  • Supportive care for side effects – fatigue (American ginseng, mushrooms), anorexia, reflux, constipation, anemia/leukopenia, neuropathy (fish oil, acupuncture), cardiomyopathy
  • Making sure evidence indicates safety for concurrent use of supplement recommendations during specific treatments
FISH OIL

- Anti-inflammatory, good for nerves, brain, joints, cardiovascular health, insulin/diabetes
- Broad anti-cancer effects in the body
- Some evidence for hot flashes, joint pain
- Fish oil is most effective form of omega 3
- Poor conversion of plant based omega 3 (ALA) to EPA and DHA. Cortisol is inhibitory to necessary enzymes of conversion.
- Rx: 3 grams daily (EPA+DHA)
- Caution: quality (checked for mercury) and overharvesting concerns
PROBIOTICS

• Allow proper nutrient conversion and assimilation in the gut
• Avoid opportunistic infection
• Decrease inflammatory processes
• Improve NK cell function
• Restore healthy flora post chemo and radiation
• Rx: individual
• Tremendous research emerging on the microbiome and immune system
Naturopathic and Integrative Oncology

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- Adjunctive natural anti-tumor agents
Diet

- Treatment vs non-treatment
- BEST PREVENTION
  - Weight loss - good vs bad
    - BMI - calculate BMR and caloric intake, reduce by 10%, divide into 3 portions - br/lu/din, dinner never more than ⅓ total caloric intake, at least 2h prior to sleep
  - Vegetables - 7-10 servings/d minimum, all the colors
Diet

- Sugar
- Sensitivities - gluten, dairy
- Red meat
- Ketogenic/caloric-restricted ketogenic
- Intermittent fasting (chemo or regular)
- Fasting and fasting-mimicking
Naturopathic and Integrative Oncology

- **Exercise - BEST PREVENTION**
  - 20m 5x/wk minimum
  - More robust is stronger protection
  - Careful DURING treatment
  - Adrenal vs thyroid

- **Lifestyle**
  - No smoking, exposure to toxins
  - Routine, adequate and regular sleep
  - Mind-body techniques
  - Time outside, sunshine
Naturopathic and Integrative Oncology

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  (surgery, chemo, radiation, hormonal treatments, targeted therapies, immunotherapy)  
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- **Adjunctive natural anti-tumor agents**
Supplements

What the heck are supplements?
- Vitamins, Minerals, Herbs/Botanicals, Phytochemicals

Recommendations -
- Should be recommended with a particular purpose (Not ALL anti-cancer/immune support, should be individualized)
- Should utilize testing when possible (eg Vitamin D3)
- Try to use broadly acting (covers more than one concern)

Quality
- Good brand (safe, uncontaminated)
- Good form of the supplement
- Correct dosing (often dosing is too low)
Adjunctive Natural Anti-Tumor Agents

**Strong, proven benefit**

- Melatonin
- Vitamin D
- Curcumin/turmeric
- Mushrooms - hot water extracts of reishi, maitake, coriolus
- Green tea polyphenols (EGCG)
- High-dose intravenous vitamin C
- Vitamin K2
MELATONIN

Potential effect for

- Hot flashes
- Anxiety
- GERD
- Sleep
- Recurrence prevention

Relationship to the immune system

Rx: Individual 1-20mg nightly
VITAMIN D

• Inhibits inflammatory cytokines
  Decrease TNF, IL6, CRP
• Bone health (along with important nutrients - vitamin K, silica, boron, strontium)
• Some evidence for depression, cognition (brain fog), low levels may be more prevalent in cancer patients
• Optimal may be different than the reference range, deficiencies should be corrected
• My clinical experience shows reduced joint pain, hot flashes, depression, anxiety
• Rx: Ideal blood levels 45-65ng/mL
• Caution: sarcoidosis, renal calculi

Curcumin

![Curcumin Diagram]

### Curcumin Targets

**Multi-targeted**
- Inflammatory cytokines: IL-1, IL-6, IL-12, TNF-α, INF-γ, GM-CSF, IL-8, IL-4, MCP-1, LTB4, IL-1β, COX-2
- Enzymes: COX-2, EGFR, TNF, HER-2, ERK, AKT, JNK, P38, JAK, MAPK, PKA, PKC
- Growth factors: FGF, IGF, EGF, TGF-β, VEGF, PDGF, HGF, IL-8, EPO, TNF-α, GM-CSF, IFN-γ
- Receptors: ErbB, EGF, HER, VEGF, PDGF, IL-6, TNF-α, FGF, IGF, EGF, EGFR, HER, ERK, AKT, JNK, P38, JAK, MAPK, PKA, PKC
- Adhesion molecules: E-selectin, ICAM-1, VCAM-1, VLA-4, VCAM-1, ICAM-1, VLA-4, VCAM-1
- Anti-apoptotic proteins: Bcl-2, Bcl-xL, Bcl-w, Bcl-2, Bcl-xL, Bcl-w, Bcl-2, Bcl-xL, Bcl-w, Bcl-2, Bcl-xL, Bcl-w
- Protein kinases: PKC, JNK, P38, ERK, AKT, JAK, MAPK, PKA, PKC
- Transcription factors: AP-1, ETS, NFκB, CREB, STAT, L-STAT, SP1, NFκB, CREB, STAT, L-STAT, SP1
- Others: Cyclin D1, Cyclin E, CDK4, p38 MAPK

**Mono-targeted**
- COX-2: Celecoxib
- EGFR: Erlotinib
- TNF: Remifentanil
- HER-2: Herceptin
- PI3K: Gleevec
- VEGF: Avastin
- Tubulin: Paclitaxel
- Topoisomerase: Camptothecin

### Curcumin-Related Pathways

**Enzymes**
- ATPase, FPT, COX-2, GST, Telomerase, 5-LOX, GCL, GCL, MMP, GDC, iNOS, NQO-1, Src-1, TMMMP-3, Desaturase

**Transcription factors**
- NFκB, AP-1, Stat-1, Stat-3, CREB, Egr-1, Wnt-1, β-catenin, MIF, Nrf-2, PPAR-γ, TERE

**Inflammatory cytokines**
- IL-1, IL-6, IL-8, IL-12, IL-18, MCP, MiP, TNF-α

**Kinases**
- FAK, AKT, ERK, MAPK, PKC, PKA, PKB

**Growth factors**
- EGF, HGF, IGF, PDGF, TGF-β1, VEGF

**Receptors**
- IR, FAS, ER-α, EPCR, H2R, EGF, HER, IL-1, IL-1R, ECHR, AR, LDR, ITR, AR, DR-4, DR-5

**Others**
- UPA, Bcl-xL, Bcl-2, Hsp-70, ICAM-1, Cyclin D1, L-STAT-3, MAP, MIRF, DEF-40, p53
Adjunctive Natural Anti-Tumor Agents

**Anecdotal benefit, limited studies**

- Mistletoe - subcutaneous
- Mistletoe - intravenous
- Vitamin C - intravenous, high dose
- Low-dose naltrexone - off-label
- Metformin - off-label
Other useful topics to know about

- Metronomic chemotherapy
- Proton-beam radiation
- Interventional radiation oncologists
- Tumor marker testing
- Circulating tumor cell testing
- Immunotherapy pathology testing on tumor
- Off-label drug protocols
Survivorship (briefly!)

• After conventional treatment –
  • SURVIVORSHIP
  • Symptom management – eg menopausal symptoms, digestive disruption from abdominal surgery, lymphedema post-surgery
  • Recurrence prevention
    • Working to optimize terrain
    • Psycho-emotional support – fear, anxiety often develop AFTER treatment is complete
    • Monitoring - mammogram, colonoscopy, DEXA, PSA, etc
Resources
This is a remarkable survey of holistic cancer treatment. If I had cancer, I would read this book. —Wenner, C. C., M.D., F.A.C.S., author of Way the Cancer's Manual

ALTERNATIVE THERAPIES THAT TREAT AND PREVENT CANCER
OUTSIDE THE BOX
DR. MARK STENGLE & DR. PAUL ANDERSON

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Cancer Therapies

The Definitive Guide to Cancer
An Integrative Approach to Prevention, Treatment, and Healing
THIRD EDITION


By LINDA N. MULHELLER, M.D., F.A.P.E., AND KABEYON A. GATZELA

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• Oncology Assn of Naturopathic Physicians (OncANP) - [www.OncANP.org](http://www.OncANP.org)
• Society for Integrative Oncology (SIO) - [www.integrativeonc.org](http://www.integrativeonc.org)
Online Resources

• NCCAM at NIH: basic CAM Information: [www.NCCAM.NIH.GOV](http://www.NCCAM.NIH.GOV)
• **CanHEAL Toolkit for Cancer Care** (Weil Center for Integr. Med.)
• **Consortium of Academic Health Centers for Integrative Medicine**: [www.imconsortium.org](http://www.imconsortium.org)
• NCI subsection on CAM: [www.cancer.gov/cancertopics/pdq/cam](http://www.cancer.gov/cancertopics/pdq/cam)
Questions
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