



# Oncology Nutrition Institute

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## 250 Hour Oncology Nutrition Consulting™ Program

### Syllabus: Course 1 Cancer and the Biological Terrain

#### COURSE OVERVIEW

This course explores the many different terrain-centric dietary, physiological, and environmental that have been linked to cancer risk, development and progression. Throughout this course, students will examine food from three perspectives - as a contributor to cancer, an inhibitor for cancer, and as a cancer therapy. The focus of this introductory course is for students to gain an understanding of how to apply metabolic nutrition therapy to the ten of internal and external factors that contribute to carcinogenesis to ultimately encourage prevention. *\*\*\*Read the syllabus in its entirety as you have the option to replace one of these assessments with a testing option for yourself, i.e. genetic, digestive, hormonal testing but many of these tests can take several weeks to complete.*

#### REQUIRED TEXTBOOKS & READING

- The Metabolic Approach to Cancer: Integrating Deep Nutrition, the Ketogenic Diet, and Nontoxic bio-individualized therapies. By Dr. Nasha Winters and Jess Higgins Kelley. Chelsea Green Publishing. 2017
- Understanding Normal and Clinical Nutrition (UNCN), 9th edition, by Sharon Rady Rolfes, Kathryn Pinna, and Ellie Whitney. Wadsworth, Cengage Learning, 2012.
- Tripping Over the Truth, by Travis Christofferson. CreateSpace Independent Publishing Platform, 2014.
- Life Over Cancer by Keith Block, MD. Bantam Bell. 2009.
- Naturopathic Oncology, third edition by Dr. Neil McKinney, ND. Liaison Press. 2016.
- Pottenger's Prophecy by Gray Graham N.T.P, Deborah Kesten, M.P.H and Larry Scherwitz. White River Press. 2011

#### SUGGESTED READING:

- *Definitive Guide to Cancer: An Integrative Approach to Prevention, Treatment and Healing*, third edition, by Lise Alschuler, ND, and Karolyn A Gazella. Random House Publishing. 2010.
- *The Inflammation Syndrome*, second edition. By Jack Challem. John Wiley & Sons, Inc. 2010
- *The Cortisol Connection, second edition* by Shawn Talbott, PH.D. Hunter House Publishers, 2007
- *Wheat Belly*. By William Davis, MD. Rodale Books 2014
- *Living Downstream*. Movie, available on amazon.

## **CLASS 1: INTRODUCTION TO CANCER – HISTORY, HALLMARKS, AND THE BIOLOGICAL TERRAIN**

**Content:** This class introduces the history of cancer and the identified ten hallmarks of cancer. The hallmarks section includes key terms, mechanisms, and characteristics of cancer cells accepted by both western conventional and alternative medicine practices. Tumor centric vs. terrain centric approaches are presented and an introduction to the Terrain Ten is provided.

### **Assignment:**

- Read *Tripping Over the Truth, part 1 pages 1-40*
- Read *The Metabolic Approach to Cancer*, chapters 1 & 2

### **Assessment:**

- Take the quiz in chapter 2 of the *Metabolic Approach to Cancer* and write a page summary of your top two highest areas and the past and current lifestyle approaches you believe may have contributed to them. Submit to your instructor week 5, module 1.

## **CLASS 2: GENETICS, EPIGENETICS, NUTRITIONAL GENOMICS, AND THE MICROBIOME IN CANCER**

**Content:** This class provides an overview of the genetic theories of cancer and current research, including an introduction to epigenetics, nutrigenomics, the microbiome and the roles they play in cancer as well as nutrition considerations for each.

### **Assignment:**

- Read *The Metabolic Approach to Cancer* chapters 3 and 6
- Read *Pottenger's Prophecy* pages 1-77, 97-149

### **Assessment:**

- As if you were explaining to a client, write a one-page description of the difference between genetics and epigenetics and three important nutritional considerations – include 1-2 references of outside research. Submit to your instructor week 5, module 1.

### **CLASS 3: CANCER IS A METABOLIC DISEASE**

**Content:** This class covers the cancer cell's ability to reprogram energy metabolism, and includes an introduction to the work of Dr. Otto Warburg and the role glucose plays in cancer progression. Sugar consumption trends are outlined, in addition to nutrition considerations for reducing intake of sugar and refined carbohydrates and teases therapeutic dietary approaches including the ketogenic diet.

**Assignment:**

- Read *The Metabolic Approach to Cancer*, chapter 4
- Read *Tripping Over the Truth*, chapter 6

**Assessment:**

- Track your own sugar and carbohydrate consumption (in grams per day) for three days either by hand or by using an on-line tool i.e. chronometer. Report your findings in a three-paragraph summary which include how you will have the sugar conversation with your clients and have them track their intake. Submit to your instructor week 5, module 1.

### **CLASS 4: ENVIRONMENTAL AND DIETARY CAUSES OF CANCER AND DETOXIFICATION STRATEGIES**

**Content:** A review of known and probable carcinogens in air, food and water sources. The focus is on toxic substances, chemicals, EMFs, heavy metals, smoking, and products known to cause cancer in humans. This class will also provide an introduction to detoxification approaches.

**Assignment:**

- Read *The Metabolic Approach to Cancer*, chapter 5

**Assessment:**

- Do a toxin tour of your life and home and assess where you can improve in a short 1-page summary.
- Create a one-page environmental toxin client questionnaire to be used in practice.
- **Submit these assessments to your instructor week 5, module 1.**

### **CLASS 5: CANCER, IMMUNITY & NUTRITION**

**Content:** In this class, introductions to the various viruses that cause cancer are presented, in addition to the role the immune system plays in cancer. The Western approach of using immunotherapies and vaccines is also discussed. Nutrients and therapeutic dietary approaches that support the immune system including vitamins C and D, mushrooms, and elimination diets are described.

**Assignment:**

- Read *The Metabolic Approach to Cancer*, chapter 7
- Read *Life Over Cancer*, chapter 16 pages 346-367
- Read *Naturopathic Oncology*, pages 135, 140, 147, 258, 262-270

**Assessment:**

- Pick one or more immune boosting nutrients or foods and create either a 2-page research paper with citations on those nutrients and their associated anticancer actions or create a handout that includes a recipe.
- **MODULE 1 IS DUE. Submit assessments from weeks 1-5 (module 1) to your instructor in one email. Please review the assessment policies before submitting.**

**CLASS 6: INFLAMMATION AND CANCER**

**Content:** The inflammatory response is intricately linked to the progression of cancer. Understanding how the inflammatory response is mounted and the differences between chronic and acute inflammation is critical in the context of cancer. Additionally, the nutrition considerations that can both promote and prevent the inflammatory response is a main theme. A look at omega-3 and omega-6 fatty acids and their ratios is discussed.

**Assignment:**

- Read *The Metabolic Approach to Cancer* chapter 8

**Assessment:**

- Pick three anti-inflammatory foods and create either a handout or a 2-page report on their anticancer action. Include your own research and references. Submit to your instructor week 10, module 2.

**CLASS 7: INTRODUCTION TO OXIDATION AND CIRCULATION IN CANCER**

**Content:** Oxidative stress, angiogenesis, and metastasis are hallmarks of cancer that can be addressed through nutrition. This class discusses the controversies and considerations around the use of antioxidants during conventional treatments. Blood circulation and metastasis have significant basis in nutrition and exercise status, and these considerations, including vitamin K, will be covered in depth.

**Assignment:**

- Read *Naturopathic Oncology* pages 29-34, 103, 134, 144-154
- Read *Life Over Cancer*, chapters 14 and 17 pages 300-324, 368-391
- Read *The Metabolic Approach to Cancer* chapter 9

**Assessment:**

- Do your own research, and write a 1-page paper or create a client handout on the topic of nutrition and cancer metastasis. Include two original

citations and your business/contact information. Submit to your instructor week 10, module 2.

## **CLASS 8: ROLE OF HORMONES IN CANCER**

**Content:** Estrogen and other sex hormones are very powerful drivers of cancer. Hormone blockade therapies are a main Western cancer approach for breast, prostate, and other cancers. Understanding the role of hormones in cancer and also the role of environmental xenohormones in cancer is paramount. This class discusses nutrition guidelines on how to balance hormones.

### **Assignment:**

- Read *The Metabolic Approach to Cancer* chapter 10
- Read *Naturopathic Oncology* pages 143, 170, 299-300, 307, 311

### **Assessment:**

- Choose either a conventional hormone blockade treatment or a nutrition intervention used to balance hormones and write 3-5 paragraphs or create a handout on this topic citing pro's and con's and how to's of your hormone compound of choice. Submit to your instructor week 10, module 2.

## **CLASS 9: STRESS AND BIORHYTHMS IN CANCER**

**Content:** Physical and emotional stress can promote the cancer process and limit the effect of certain cancer treatments. Cortisol is a hormone that regulates many biorhythmic cycles that are critical to maintaining homeostasis. In this class we explore the importance of biorhythms in relation to homeostatic balance.

### **Assignment:**

- Read *Naturopathic Oncology* pages 163, 202, 442-446
- Read *Life Over Cancer*, pages 212-279, 408-429
- Read *The Metabolic Approach to Cancer* chapter 11

### **Assessment:**

- Pick one stress lowering and one biorhythmic balance approach and implement for one week. Write a short summary of your experiences and how you might counsel a client on these approaches. Submit to your instructor week 10, module 2.

## **CLASS 10: EMOTIONAL WELLBEING AND THE ENDOCANNABINOID SYSTEM**

**Content:** Understand the incredibly important role our thought patterns and past traumas play in the development of cancer. Learn a different, more genetically tailored approach to depression and the role cannabinoids play in helping to manage various types of pain which often goes hand in hand with depression. An introduction to the endocannabinoid system will be presented.

**Assignment:**

- Read *The Metabolic Approach to Cancer* chapter 12
- Read *Naturopathic Oncology* pages 211- 218, 251-254, 443-446

**Assessment:**

- Calculate your ACES score (<https://developingchild.harvard.edu/media-coverage/take-the-ace-quiz-and-learn-what-it-does-and-doesnt-mean/>) and try integrating one emotion balance technique – report on your findings
- **MODULE 2 IS DUE. Submit assessments from weeks 6-10 (module 2) to your instructor.**