

## FOUNDATIONS OF INTEGRATIVE ONCOLOGY

#### Module 2 The Complex Landscape of Cancer

### Patient Biological Terrain & the Tumor Microenvironment Lesson 4

# Learning Objectives - Understand and describe:

- Primary Elements of the Tumor Microenvironment
- Primary Nuclear Genomic Proteomic and Intracellular Factors
- Primary Intracellular Factors and the Transcriptome
- Cell Membrane Dynamics
- Extracellular Factors
- Cellular Metabolic Factors
- Primary Epigenetic Influences on Oncogene and Tumor Suppressor Gene Expression
- Impact of Diet, Lifestyle and Behavior on Gene Expression and Immune Modulation

## **Characteristics of the Patient**

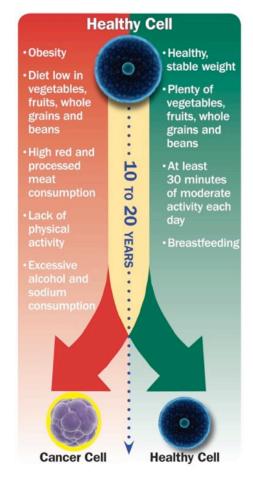
- Nuclear & Intracellular Factors
- Cell Membrane Dynamics
- Extracellular Factors

Epigenetics: something that affects a cell, organ or individual without affecting its DNA

## **Gene Products = Transcriptome**

Lifestyle & Behavioral Factors impact gene expression and immune modulation.

Stress, diet, behavior, lifestyle, sleep, exercise, toxins



### References

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