

# **Oncology Nutrition:**

**Hot topics and Evidence Based  
Recommendations**

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# Learning Objectives

- Identify Hot Topics in Oncology Nutrition
- Identify basic recommendations from the World Cancer Research Fund
- Recognize when to encourage patients to modify their eating behaviors to lessen cancer risk

# Why is Nutrition Important

- Manage side effects from treatments
- Reduce risk for recurrence
- Reduce risk of secondary cancers
- Improve QOL
- Manage weight
- Improve strength
- Empower patient

# Malnutrition in Cancer

- Malnutrition is present in up to 80% of cancer patients
- Encourage adequate protein AND Kcal intake
- Repletion takes time

# Oral Nutrition Supplements

- Boost/Ensure
  - Orgain – Dairy based & Plant based
  - Kate Farms – Plant based
  - Reason
  - Enu
- 
- DME Referral

# Oral Supplements

- Get to know your DME/Home Infusion providers
- Medicaid often will cover supplements with proper documentation
- Some private insurances will cover
- Medicare will NOT cover oral supplements (only TF)
- RD documentation

# After treatment



- Strive for a healthy weight
- Follow guidelines for prevention
- Decrease risk for recurrence



# World Cancer Research Fund

- A non-profit org that funds research and advocates for policies to prevent cancer.
- Mission to reduce the number of preventable cancer deaths by helping people make informed lifestyle choices.

WCRF's work includes:

## Research

- WCRF funds research on how diet, weight, and physical activity affect cancer risk and survival. Research is used to create evidence-based recommendations for cancer prevention.

## Policy advocacy

## Education

- WCRF educates the public about cancer prevention. WCRF was the first cancer charity to raise awareness of the link between diet and cancer risk.

- **Guidance:** developed with input from experts
- **Recommendation:** strong evidence base
- Includes American Institute for Cancer Research (AICR)

# WCRF/AICR Report

- 1997
- 2007
- 2018
  - Change in focus on dietary patterns rather than specific foods

# SUMMARY OF STRONG EVIDENCE ON DIET, NUTRITION, PHYSICAL ACTIVITY AND THE PREVENTION OF CANCER

To reference this matrix please use the following citation:

World Cancer Research Fund/ American Institute for Cancer Research. Continuous Update Project: Diet, Nutrition, Physical Activity and the Prevention of Cancer. Summary of Strong Evidence. Available at: [wcrf.org/cupmatrix](http://wcrf.org/cupmatrix) accessed on DD-MM-YYYY

Abbreviation: SLR, systematic literature review.

|   | Wholegrains | Foods containing dietary fibre | Alfalfa | Foods containing beta-carotene | Non-starchy vegetables or fruit (aggregated) <sup>2</sup> | Red meat | Processed meat | Cantonese-style salted fish | Dairy products | Foods preserved by salting | Arsenic in drinking water | Mate | Coffee | Sugar sweetened drinks | Alcoholic drinks | 'Mediterranean type' dietary pattern | 'Western type' diet | 'Fast foods' | Glycaemic load | High-dose beta-carotene supplements | Beta-carotene | Calcium supplements | Physical activity (moderate and vigorous) | Vigorous physical activity | Walking | Screen time (children) <sup>15</sup> | Screen time (adults) <sup>15</sup> | Adult body fitness <sup>16</sup> | Body fitness in young adulthood <sup>13</sup> | Adult weight gain | Adult attained height <sup>21</sup> | Greater birthweight | Lactation <sup>22</sup> | Having been breastfed |
|---|-------------|--------------------------------|---------|--------------------------------|---|----------|----------------|-----------------------------|----------------|----------------------------|---------------------------|------|--------|------------------------|------------------|--------------------------------------|---------------------|--------------|----------------|-------------------------------------|---------------|---------------------|---|----------------------------|---------|--------------------------------------|------------------------------------|----------------------------------|---|-------------------|-------------------------------------|---------------------|-------------------------|-----------------------|
| <b>MOUTH, PHARYNX, LARYNX 2018</b>              |             |                                |         |                                |   |          |                |                             |                |                            |                           |      |        |                        |                  |                                      |                     |              |                |                                     |               |                     |   |                            |         |                                      |                                    |                                  |   |                   |                                     |                     |                         |                       |
| <b>NASOPHARYNX 2017 (SLR)</b>                   |             |                                |         |                                |   |          |                |                             |                |                            |                           |      |        |                        |                  |                                      |                     |              |                |                                     |               |                     |   |                            |         |                                      |                                    |                                  |   |                   |                                     |                     |                         |                       |
| <b>ESOPHAGUS (ADENOCARCINOMA) 2016</b>          |             |                                |         |                                |   |          |                |                             |                |                            |                           |      |        |                        |                  |                                      |                     |              |                |                                     |               |                     |   |                            |         |                                      |                                    |                                  |   |                   |                                     |                     |                         |                       |
| <b>ESOPHAGUS (SQUAMOUS CELL CARCINOMA) 2016</b> |             |                                |         |                                |   |          |                |                             |                |                            |                           |      |        |                        |                  |                                      |                     |              |                |                                     |               |                     |   |                            |         |                                      |                                    |                                  |   |                   |                                     |                     |                         |                       |
| <b>LUNG 2017</b>                                |             |                                |         |                                |   |          |                |                             |                |                            |                           |      |        |                        |                  |                                      |                     |              |                |                                     |               |                     |   |                            |         |                                      |                                    |                                  |   |                   |                                     |                     |                         |                       |
| <b>STOMACH 2016</b>                             |             |                                |         |                                |   |          |                |                             |                |                            |                           |      |        |                        |                  |                                      |                     |              |                |                                     |               |                     |   |                            |         |                                      |                                    |                                  |   |                   |                                     |                     |                         |                       |
| <b>PANCREAS 2012</b>                            |             |                                |         |                                |   |          |                |                             |                |                            |                           |      |        |                        |                  |                                      |                     |              |                |                                     |               |                     |   |                            |         |                                      |                                    |                                  |   |                   |                                     |                     |                         |                       |
| <b>GALLBLADDER 2015</b>                         |             |                                |         |                                |   |          |                |                             |                |                            |                           |      |        |                        |                  |                                      |                     |              |                |                                     |               |                     |   |                            |         |                                      |                                    |                                  |   |                   |                                     |                     |                         |                       |
| <b>LIVER 2015</b>                               |             |                                |         |                                |   |          |                |                             |                |                            |                           |      |        |                        |                  |                                      |                     |              |                |                                     |               |                     |   |                            |         |                                      |                                    |                                  |   |                   |                                     |                     |                         |                       |
| <b>COLORECTUM 2017</b>                          |             |                                |         |                                |   |          |                |                             |                |                            |                           |      |        |                        |                  |                                      |                     |              |                |                                     |               |                     |   |                            |         |                                      |                                    |                                  |   |                   |                                     |                     |                         |                       |
| <b>BREAST PREMENOPAUSE 2017</b>                 |             |                                |         |                                |   |          |                |                             |                |                            |                           |      |        |                        |                  |                                      |                     |              |                |                                     |               |                     |   |                            |         |                                      |                                    |                                  |   |                   |                                     |                     |                         |                       |
| <b>BREAST POSTMENOPAUSE 2017</b>                |             |                                |         |                                |   |          |                |                             |                |                            |                           |      |        |                        |                  |                                      |                     |              |                |                                     |               |                     |   |                            |         |                                      |                                    |                                  |   |                   |                                     |                     |                         |                       |
| <b>OVARY 2014</b>                               |             |                                |         |                                |   |          |                |                             |                |                            |                           |      |        |                        |                  |                                      |                     |              |                |                                     |               |                     |   |                            |         |                                      |                                    |                                  |   |                   |                                     |                     |                         |                       |
| <b>ENDOMETRIUM 2013</b>                         |             |                                |         |                                |   |          |                |                             |                |                            |                           |      |        |                        |                  |                                      |                     |              |                |                                     |               |                     |   |                            |         |                                      |                                    |                                  |   |                   |                                     |                     |                         |                       |
| <b>PROSTATE 2014</b>                            |             |                                |         |                                |   |          |                |                             |                |                            |                           |      |        |                        |                  |                                      |                     |              |                |                                     |               |                     |   |                            |         |                                      |                                    |                                  |   |                   |                                     |                     |                         |                       |

# Over Nutrition & Cancer

- Colorectal
- Breast
- H/N
- Esophageal
- Pancreatic
- Liver
- Endometrial
- Stomach
- Gallbladder
- Ovary
- Prostate

WCRF

# Survivor Trends & Overall Mortality

- Inverse Relationship
  - Veggies
  - Fish
  - Healthy Diet
- ETOH: Associated
- Western Diet: Strong Positive Association

# The Recommendations

- 1) **Body Fatness** – Be as lean as possible within the normal range of body weight
- 2) **Physical Activity** – Be physically active as part of every day life
- 3) **Food & Drink that promote weight gain** - Limit consumption of energy dense foods & Avoid sugary drinks
- 4) **Plant Foods** – Eat mostly foods of plant origin

- 5) **Animal Foods** – Limit red meat and avoid processed meat
- 6) **Alcoholic Drinks** – Limit
- 7) **Preservation, Processing, Preparation** – Limit consumption of salt, Avoid moldy grains or legumes
- 8) **Dietary Supplements** – Aim to meet nutrient needs through *diet* alone

# WCRF/AICR - Special Recs



- 1) **Breastfeeding** – Mothers to breast feed; children to be breastfed
- 2) **Cancer Survivors** – Follow the recommendations for cancer prevention

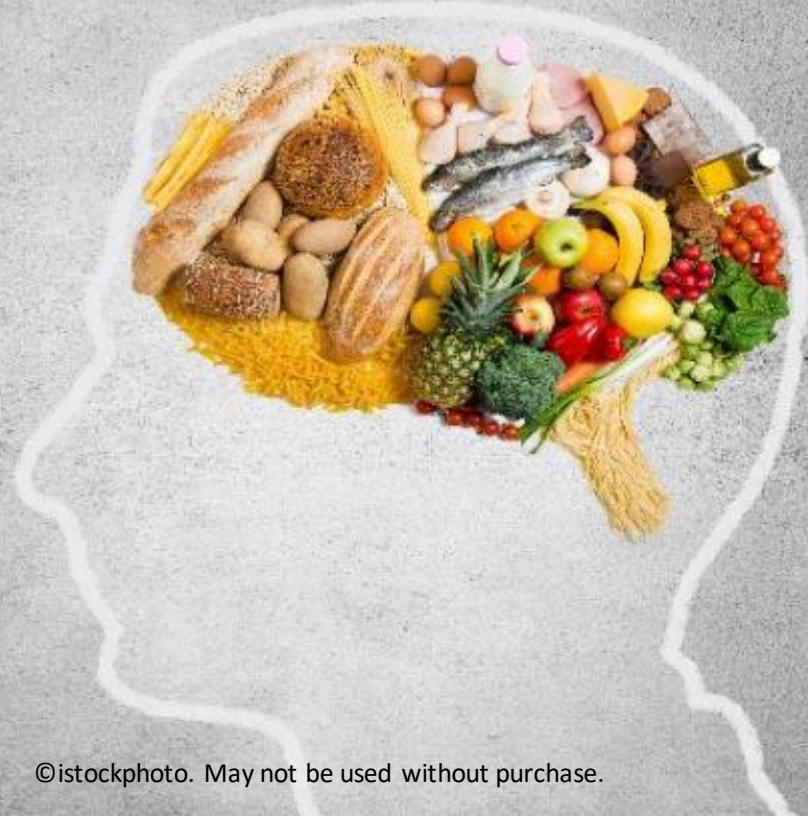


# Patient Encounters

- Meet the patient where they are
- Encourage that small changes can be significant
- SMART goals

# Choose Foods First

- Get nutrients from foods  
not supplements
- Food Synergy



# Protein



- Basic building block of every cell
- Needed for healing
- Muscle mass
- Sources:
  - beans, hummus
  - meats, fish
  - milk, cheese
  - nuts, seeds
  - eggs

# What About Meats?

- **Hot Topic: Plant based diet**
- No more than 11 - 18oz of red meat per week (beef, lamb, pork)
- Choose fish, chicken, eggs and turkey as an alternative
- Red Meats: good source of protein and iron, fat
  - Heterocyclic Amines (HCA)
  - Polycyclic Aromatic Hydrocarbons (PAH)
- Choose lean meats if possible
- Try moist heat cooking methods
- Marinate
- Lessen or avoid processed meats

# Fiber

- 30g fiber (from food) per day recommended
- Fruits/veggies, nuts/seeds, whole grains, beans/legumes
- Protective:
  - Colorectal
  - Weight Management



# Fruits/Vegetables

- **Variety**
- Low in calories, high in nutrients
- Vitamins
- Phytochemicals:
  - “Fight”-O-Chemicals
- High in Fiber
  - Insoluble
  - Soluble



# Hot Topic: Organic Foods

- No proven change in risk for recurrence or diagnosis (ACS)
- More important to eat the fruits/veggies rather than solely organic

# Fluids

- Prevent dehydration
- Helps keep mouth moist
- Thins mucous
- Aids constipation
- Liquid at room temperature = fluid
  - Ice cream, J-ello, popsicles, soups
- Appetite control
- Hot Topic: Alkaline water no proven benefit



# Alcohol

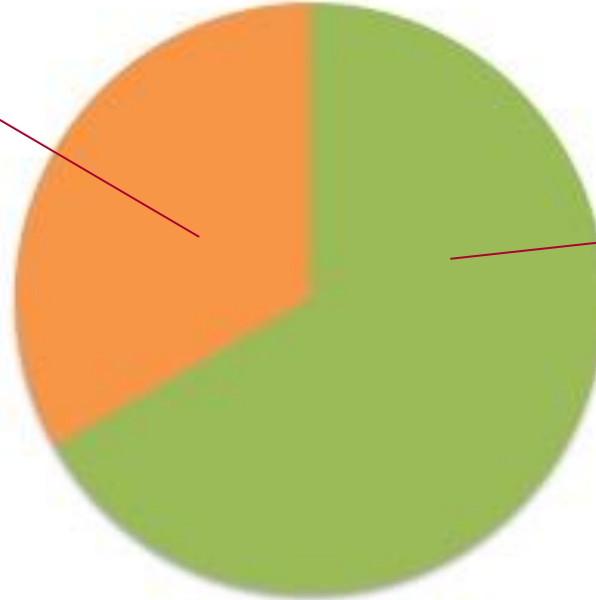
- Contributes to excess kcal
- Increases risk especially: Oral, Laryngeal, Esophageal, Breast, Stomach, Liver
- Alcohol contains ethanol: ethanol is the cancer causing compound

# Hot Topic: Soy & Cancer

- Lower incidence of cancer in populations with high soy consumption
- Whole soy foods are OK
- Soy Supplements???
- “The current evidence does not support guidance to consume more soy foods (or to introduce soy foods if these are not currently part of the diet) after a diagnosis of breast cancer, but for those who already consume them, there is no need to stop.” WRCF

# The New American Plate (AICR)

**Animal  
Foods (1/3)**



**PLANT  
FOODS (2/3)**

Veggies,  
Fruits,  
Beans,  
Legumes,  
Nuts/seeds

- Mediterranean
- DASH diet
- Vegetarian
- Plant Based

# Hot Topic: Sugar

- Does sugar feed cancer?
- Can contribute to obesity
- Glycemic index
- Limit “Empty” calories:
  - Candy, Soda
- Choose sugars wisely
  - Whole grain carbs when possible
  - Pair with protein or fat

(Onc DPG-Academy of Nutrition and Dietetics)



# Physical activity

- Walk More/Sit Less
- Decreases constipation
- Maintain muscle
- Increase appetite
- Feel Better!
- Reduced recurrence
  - Even without wt loss
- Protective
  - Colon
  - Breast
  - Endometrial
- Promote Insulin Sensitivity





# References For Patients

- Refer to RDN if possible
- American Cancer Society
- American Institute for Cancer Research
- Memorial Sloan Kettering: Herb & Botanicals
- World Cancer Research Fund
- Weight management: Noom, Weight Watchers



# Questions?

