

# Seaweed Consumption and Colorectal Cancer Risk in a Multiethnic Cohort Population



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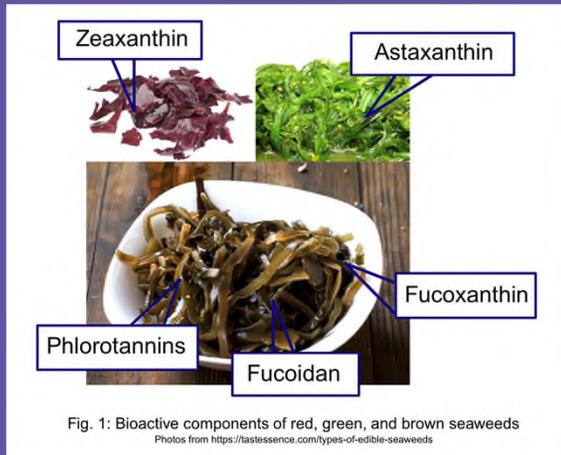
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## Abstract

Colorectal cancer (CRC) is one of the most common cancers in the US. While CRC incidence and mortality rates are declining, incidence of early-onset CRC is rising. Lifestyle factors, especially nutrition, are recognized as modulators of CRC risk. Edible seaweed and some of its components are shown to have anticancer effects for some types of cancer, potentially decreasing cancer risks. Our project will look at data from the Multiethnic Cohort Study to determine whether higher seaweed intake is associated with a lower risk of CRC. Results are pending.

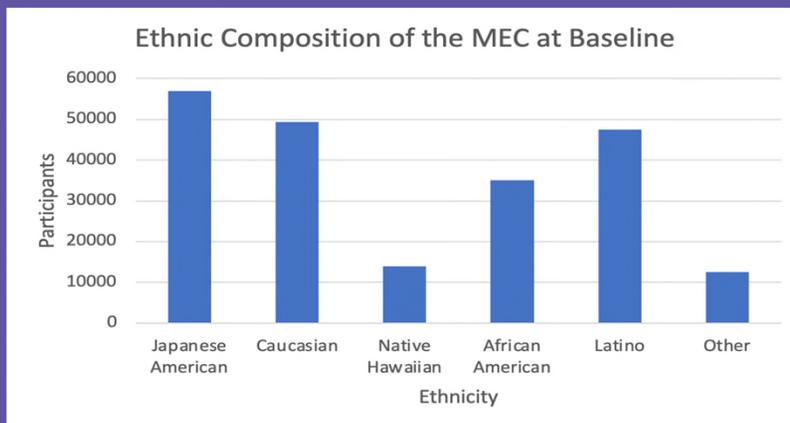
## Background

- CRC has third highest cancer incidence in the U.S.
- Inflammatory diet patterns associate with increased CRC risk.(1)
- Scientific evidence suggest diets high in edible seaweed may reduce the incidence of some types of human cancers, such as breast, colorectal, and biliary tract cancers. (2-5)
- Goal: identify whether consumption of seaweed and/or its bioactive components may be useful for prevention of cancer.
- We used the Multiethnic Cohort (MEC) to examine populations normally consuming dietary seaweed.



## Multiethnic Cohort (MEC) Study

- Over 215,000 residents of Hawai'i and Los Angeles, CA
- Five main ethnic groups: Japanese Americans, Native Hawaiians, African Americans, Latinos, and whites.
- Data collected: usual diet, dietary supplements and medications, physical activity, occupation, cancer family history (6)



## Objectives

Determine whether seaweed consumption affects CRC risk in:

- The overall MEC participant population; and
- Japanese-American men in specifically.

## Food Frequency Questionnaire (FFQ)

HOW OFTEN DID YOU EAT THE FOLLOWING ITEMS?	AVERAGE USE DURING LAST YEAR							
	Never or hardly ever	Once a month	2 to 3 times a month	Once a week	2 to 3 times a week	4 to 6 times a week	Once a day	2 or more times a day
Seaweed (fresh or dried) (such as ogo limu, furikake)	○	○	○	○	○	○	○	○

## Data Analysis Plans

- Cox proportional hazards regression will be used to model CRC incidence with seaweed consumption as the primary exposure.
- Seaweed consumption will be considered as a continuous variable rather than a categorical one to preserve statistical power in the presence of measurement error in the FFQ assessment of intake.

## Conclusion

Pending data analyses, we will characterize the strength of the association between seaweed consumption and CRC risk uncovered in the MEC population.

## Future Plans

- We hypothesize increased seaweed intake is associated with a reduction in CRC risk in the overall MEC and in the Japanese-American men subgroup.
- Perform statistical analyses.
- Report findings and discuss the challenges of doing this type of research, especially regarding the effects of measurement error and the difficulty of obtaining data during a global pandemic.

## References

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