American Institute for Cancer Research®

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February 7, 2020

Barbara Schneeman, PhD
Chair, 2020 Dietary Guidelines Advisory Committee
c/o Eve Stoody, PhD
Designated Federal Officer
Center for Nutrition Policy and Promotion
Food and Nutrition Service
U.S. Department of Agriculture
3101 Park Center Drive, Room 1034
Alexandria, VA 22301

Dear Dr. Schneeman and Members of the 2020 Dietary Guidelines Advisory Committee:

The American Institute for Cancer Research (AICR) presents these comments to the Dietary Guidelines Advisory Committee (DGAC) as it moves forward with prioritizing development and implementation of the remaining research protocols. As was discussed at the DGAC's January 23-24, 2020 public meeting, we understand that time constraints may prevent the DGAC from completing systematic reviews for all research questions, and each subcommittee has been asked to prioritize its remaining work. **These comments discuss our recommendations regarding prioritization of the remaining research questions.**

> **We urge the Beverages and Added Sugars Subcommittee to prioritize** conducting systematic reviews that respond to the research question: ***What is the relationship between alcohol consumption and risk of certain types of cancer?***

> **We urge the Dietary Patterns Subcommittee to prioritize** updating the 2015 Nutrition Evidence Systematic Review (NESR) systematic reviews and conducting new systematic reviews, consistent with the research protocol, for the research question: ***What is the relationship between dietary patterns consumed and risk of certain types of cancer?*** **Priority cancer sites for new or updated reviews should include colorectal, liver and endometrial cancers.**

Background

AICR is a member of the World Cancer Research Fund (WCRF) network and the leading U.S. authority on the links between diet, weight, physical activity and cancer prevention and survival. Our mission is to champion the latest and most authoritative scientific research from around the world on cancer prevention and survival, relevant to these lifestyle factors, to help people make informed choices to reduce their cancer risk.

Since 2007, AICR/WCRF have conducted the Continuous Update Project (CUP) that comprehensively analyzes and synthesizes the global scientific research on the roles of diet, weight, and physical activity in cancer risk and outcomes. The analyses and evidence syntheses are published as Continuous Update Project (CUP) Reports and Expert Reports. The CUP has produced a series of reports on specific cancer

sites over the last 10 years. Most recently, AICR/WCRF published our Third Expert Report in May 2018, *Diet, Nutrition, Physical Activity and Cancer: a Global Perspective*. The evidence for each exposure is rigorously assessed through systematic literature reviews, meta-analyses and deliberation by an expert panel.

AICR has already submitted several comment letters to the DGAC, sharing the methodology and conclusions of its systematic literature reviews on alcohol and cancer, dietary patterns and cancer, and dietary patterns and body weight. We also submitted comments on the DGAC's dietary patterns and cancer research protocol.

The enclosed chart outlines AICR/WCRF's systematic literature review conclusions and evidence grades related to dietary patterns and cancer and how they compare to those of the 2015 DGAC, which the 2020 DGAC's research protocol proposes to update. The chart also highlights AICR's conclusions and evidence grades related to dietary patterns and cancer for the additional cancer types that the 2020 DGAC proposes to examine. In addition, the chart lists and provides links to the systematic reviews for the cancer types that AICR/WCRF's research has found to be related to alcohol consumption.

Alcohol and Cancer

We strongly recommend that the Beverages and Added Sugars Subcommittee prioritize completion of a new NESR systematic review or use AICR/WCRF's existing systematic literature reviews (see links in enclosed chart) to answer its research question on alcohol and cancer. As described in more detail in our previous comment letter (p. 13), AICR's systematic review on alcohol and cancer is high-quality, directly addresses the DGAC's research question, and timely. If the DGAC does not have sufficient capacity to complete its own NESR review, we strongly recommend that the relevant AICR/WCRF's CUP systematic reviews be utilized.

Systematic literature reviews conducted as part of WCRF/AICR's CUP have found strong evidence that consumption of alcoholic drinks increases the risk of mouth/pharynx/larynx, esophagus, liver, colorectum, breast (pre- and post-menopausal), and stomach cancers. While the amount of alcohol needed to increase cancer risk varies by cancer type, less than one small glass of alcohol per day significantly increases risk for cancers of the breast (both pre- and post-menopausal), esophagus, and mouth/pharynx/larynx.

Based on the totality of the evidence, we strongly suggest the DGAC recommend that, for cancer prevention, it is best not to drink alcohol. The risk for breast cancer and several other cancer types reaches statistical significance even below the current recommended limits of one drink per day for women and two drinks per day for men. Therefore, it is imperative that the DGAC acknowledge this increased risk and consider whether the existing recommendation is appropriate, particularly given that breast cancer is the most commonly diagnosed cancer in women in the US[1].

A strong DGAC recommendation that, for cancer prevention it's best not to drink alcohol – at all – would be a clear public health message that would avoid the potential ambiguity that arises from the high variability in alcohol content in a single drink, the different thresholds for increased cancer risk in different cancer types, and that some cancer types (e.g., breast) do not have thresholds, meaning that

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[1] American Cancer Society. *Cancer Facts & Figures 2019*. Available at https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2019/cancer-facts-and-figures-2019.pdf. p. 6.

even small/moderate amounts can be harmful. This is particularly important given that a recent survey of U.S. adults found that less than half of respondents were aware that alcohol increases cancer risk.[2] Therefore, including a conclusion and recommendation in the DGAC report regarding alcohol and cancer risk is important for increasing awareness of the alcohol and cancer link. The Committee should also make it clear that alcoholic drinks of all types – including beer, wine, and spirits – increase cancer risk.

Dietary Patterns and Cancer

We strongly recommend that the Dietary Patterns Subcommittee prioritize updates to the relevant 2015 NESR reviews and conduct new reviews on additional cancer types to allow the DGAC to respond to the research question regarding the relationship between dietary patterns and cancer. As stated in our prior comments (p. 7), we encourage the DGAC to make full use of the systematic literature reviews and reports of the AICR/WCRF CUP, which regularly review the research regarding dietary patterns and components that may define dietary patterns and their impact on cancer risk. The conclusions, grades, and links to the relevant systematic literature reviews from AICR/WCRF's CUP are provided in the enclosed chart.

For the four cancer types considered by the 2015 DGAC (breast, colorectal, prostate, and lung), the results of AICR/WCRF's systematic literature reviews are largely consistent with those of the 2015 NESR reviews. However, we wish to highlight that AICR/WCRF's review for colorectal cancer shows *strong* (convincing and probable) evidence for dietary components that both increase and decrease risk, while NESR's review for dietary patterns and colorectal cancer was graded *moderate*. **Given this discrepancy, if limited capacity prevents the DGAC from updating all four of the 2015 NESR reviews related to dietary patterns and cancer, we urge the DGAC to prioritize updating the systematic review for colorectal cancer.**

With respect to additional cancer types not reviewed by the 2015 DGAC, we suggest that the DGAC prioritize reviews on dietary patterns and liver and endometrial cancers. AICR/WCRF's CUP found strong evidence that coffee decreases the risk for both liver and endometrial cancers. There is also strong evidence that glycemic load increases the risk for endometrial cancer. Links to the systematic literature reviews can be found in the enclosed chart.

Conclusion

In conclusion, we recognize the challenge faced by the DGAC members, NESR team, and other federal staff in reviewing vast amounts of research and providing conclusions and recommendations that reflect the current status of the evidence for more than 60 research questions in a limited time span. While we acknowledge and appreciate all of their efforts, as well as the opportunity to provide input throughout the process, we believe that this need to prioritize established research questions could have been reduced had a decision been made earlier in the process for the DGAC to use existing systematic reviews and meta-analyses, such as those produced through AICR/WCRF's CUP, to answer its research questions.

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[2] AICR. Survey: "2019 AICR Cancer Risk Awareness Survey." February 2019, available at: https://www.aicr.org/assets/can-prevent/docs/2019-Survey.pdf.

We look forward to continuing to provide input and serve as a resource for the Committee and federal staff as the DGAC completes its work and the next phase of development of the 2020-2025 Dietary Guidelines begins.

Please feel free to contact Deirdre McGinley-Gieser, Senior Vice President of Programs, at d.mcginley-gieser@aicr.org or 703-237-0159 if you have any questions or we can provide any additional information.

Sincerely,

Kelly B. Browning
Chief Executive Officer
American Institute for Cancer Research

Table 1: Comparison of 2015 DGAC's with AICR/ WCRF's Conclusions and Evidence Grades Regarding Diet and Cancer and Alcohol and Cancer

		NESR Evidence			AICR/WCRF Evidence			KEY DIFFERENCES
Cancer Type	Research Question	Link to 2015 NESR Review	NESR Conclusion Statement	NESR Grade	AICR/WCRF Conclusion Statement	AICR/WCRF Grade	Link to AICR/WCRF Systematic Literature Review	Comparison
Breast cancer	What is the relationship between dietary patterns and risk of breast cancer?	https://nesr.usda.gov/what-relationship-between-dietary-patterns-and-risk-breast-cancer#fullreview	Moderate evidence indicates that dietary patterns rich in vegetables, fruit and whole grains, and lower in animal products and refined carbohydrate, are associated with reduced risk of postmenopausal breast cancer. The data regarding this dietary pattern and premenopausal breast cancer risk point in the same direction, but the evidence is limited due to fewer studies.	Postmenopausal breast cancer risk: Moderate Premenopausal breast cancer risk: Limited	For premenopausal breast cancer, there is limited-suggestive evidence that nonstarchy vegetables, dairy products, foods containing carotenoids and diets high in calcium decrease risk for breast cancer. For postmenopausal breast cancer, there is limited-suggestive evidence that non-starchy vegetables, foods containing carotenoids and diets high in calcium decrease risk for breast cancer.	Limited-Suggestive	Breast Cancer SLR	AICR/WCRF and NESR's reviews of breast cancer and dietary patterns are similar.
Colorectal cancer	What is the relationship between dietary patterns and risk of colorectal cancer?	https://nesr.usda.gov/what-relationship-between-dietary-patterns-and-risk-colorectal-cancer#plain-summary	Moderate evidence indicates an inverse association between dietary patterns that are higher in vegetables, fruits, legumes, whole grains, lean meats and seafood, low-fat dairy and moderate alcohol; and low in red and processed meats, saturated fat and sodas and sweets relative to other dietary patterns and the risk of colon and rectal cancer. Conversely, diets that are higher in red and processed meats, French fries and potatoes, and sources of sugars (i.e., sodas, sweets and dessert foods) are associated with a greater colon and rectal cancer risk.	Moderate	AICR has strong-probable evidence showing that wholegrains, foods containing dietary fiber, dairy products and calcium supplements decrease the risk of colorectal cancer. We have strong-convincing evidence that processed meat increases risk of colorectal cancer. We have strong-probable evidence that red meat increases the risk of colorectal cancer.	Strong-Convincing; Strong- Probable	Colorectal Cancer SLR	AICR/WCRF shows strong evidence for dietary components that both increase and decrease the risk for colorectal cancer.
Prostate cancer	What is the relationship between dietary patterns and risk of prostate cancer?	https://nesr.usda.gov/what-relationship-between-dietary-patterns-and-risk-prostate-cancer#plain-summary	No conclusion can be drawn regarding the relationship between dietary patterns and the risk of prostate cancer. This is due to limited evidence from a small number of studies with wide variation in study design, dietary assessment methodology and prostate cancer outcome ascertainment.	Grade not assignable	AICR has limited-suggestive evidence that dairy products and diets high in calcium increase the risk for prostate cancer.	Limited-Suggestive	Prostate Cancer SLR	AICR/WCRF and NESR's reviews of prostate cancer and dietary patterns are similar.
Lung cancer	What is the relationship between dietary patterns and risk of lung cancer?	https://nesr.usda.gov/what-relationship-between-dietary-patterns-and-risk-lung-cancer#plain-summary	Limited evidence from a small number of studies suggests a lower risk of lung cancer associated with dietary patterns containing more frequent servings of vegetables, fruits, seafood, grains and cereals, legumes and lean vs. higher fat meats and lower fat or non-fat dairy products. Despite reported modest significant reductions in risk, definitive conclusions cannot be established at this time because of the small number of articles, as well as wide variation in study design, dietary assessment and case ascertainment.	Limited	AICR has limited-suggestive evidence that vegetables, fruit, foods containing carotenoids, foods containing beta carotene, foods containing retinol, foods containing vitamin C and foods containing isoflavones decrease the risk for lung cancer. AICR has limited-suggestive evidence that red and processed meat increases the risk for lung cancer.	Limited-Suggestive	Lung Cancer SLR	AICR/WCRF and NESR's reviews of lung cancer and dietary patterns are similar.
Cancer Type	Research Question	Cancers Not Examined by 2015 DGAC			AICR/WCRF Conclusion Statement	AICR/WCRF Grade	Link to AICR/WCRF Systematic Literature Review	Key Findings
Pancreatic Cancer					AICR has limited-suggestive evidence that red meat, processed meat, foods and beverages containing fructose and foods containing saturated fatty acids increase the risk for pancreatic cancer.	Limited-Suggestive	Pancreatic Cancer SLR	AICR/WCRF shows limited-suggestive evidence that dietary patterns have a substantial effect on pancreatic cancer.
Endometrial Cancer					AICR has strong-probable evidence that coffee decreases risk for endometrial cancer. AICR has strong-probable evidence that glycemic load increases the risk of endometrial cancer.	Strong-Probable	Endometrial Cancer SLR	AICR/WCRF shows strong-probably evidence for dietary components that both increase and decrease the risk for endometrial cancer.
Liver Cancer					AICR has strong-probable evidence that coffee decreases the risk of liver cancer.	Strong-Probable	Liver Cancer SLR	AICR/WCRF shows strong-probable evidence that coffee is strongly linked to reduced risk of liver cancer.
Exposure	Research Question	Exposures Not Examined by 2015 DGAC			AICR/WCRF Conclusion Statement	AICR/WCRF Grade	Link to AICR/WCRF Systematic Literature Review	Key Findings
Alcohol	What is the relationship between alcohol consumption and risk of certain types of cancer?				AICR has strong-convincing evidence that alcoholic drinks increases the risk of the following types of cancers: mouth, pharynx, larynx, esophagus, liver, colorectum and breast (postmenopause). AICR has strong-probable evidence that alcoholic drinks increase the risk of the following types of cancers: stomach, breast (premenopause).	Strong-Convincing Strong-Probable	Mouth, Pharynx, Larynx SLR Esophageal Cancer SLR Liver Cancer SLR Colorectal Cancer SLR Breast Cancer SLR Stomach Cancer SLR	AICR/WCRF's literature review has shown that alcohol is strongly linked to the development of six separate cancers. **We recommend the committee advise that, for cancer prevention, it is best to not drink alcohol.**