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The Associations of Nut Intakes with Cancers: A Scoping Review of Meta-Analyses

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ABSTRACT

This scoping review aimed to identify the best relative risk estimates of the associations of nut intakes with cancers from published meta-analyses. A novel assessment process was employed combining the wellvalidated Cochrane Review measures, the AMSTAR 2 checklist, and a published algorithm specifically designed for conducting similar reviews. This scoping review identified and evaluated 12 meta-analysis reports and 23 risk-cancer pairs published between 2015 and 2022, on the associations of nut intakes with cancers. Eight significant high vs. low intake risk-cancer pairs and six significant dose-response pairs were identified for total nut intakes. High nut intakes might reduce cancer mortalities by 13% (3%/ 80g/week); cancer incidences by 10% (3%/5g/day); gastric cancer by 17%; colorectal cancer by 16% (33%/28g/day); colon cancer by 39% (25%/5g/day); rectal cancer by 29%; pancreatic cancer by 17% (6%/5g/day); and lung cancer by 15% (3%/5g/day). Two significant high vs. low intake risk-cancer pairs and a significant doseresponse pair were identified for tree nut intakes. High tree nut intakes might reduce cancer mortalities by 18% (8%/ 80g/week), and cancer incidences by 13%. A significant high vs. low intake risk-cancer pair and a significant dose-response pair were identified for peanut intakes. High peanut intakes might reduce cancer mortalities by 7%, and each 5g/day increase in intake might reduce cancer incidences by 3%/5g/day. To conclude nut intakes might reduce cancer risks. Given most of the meta-analyses included only a small number of component estimates, more studies are needed to further convince the associations.

Keywords: Nut intake; Cancer; Diet; Systematic review