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| **Table S5.** Characteristics of the studies included in the meta-analysis | | | | | | | |
| **Reference** | **Country** | **Study design** | **Exposure(s)** | **Number of cases/controls** | **Outcome** | **Method of assessment** | **Adjusting factors** |
| Lin et al. 2013 | USA | Nested case-control | Testosterone Estradiol SHBG | 439/719 | CRC | Testosterone and SHBG: competitive electrochemiluminescence immunoassay; Estradiol: single LC–MS/MS | Age at blood draw, fasting status, hour at blood draw, smoking, current alcohol intake, family history, physical activity, history of polyps, screening exam, BMI, and c-peptide |
| Ørsted et al. 2014 | Denmark | Cohort | Testosterone | 185/4,243 | Colon | Immunochemically using the ADVIA Centaur XP Immunoassay (Siemens AG, Erlangen, Germany) | Smoking status, cumulative smoking, BMI, alcohol consumption, level of education, and level of income |
| Chan et al. 2017 | Australia | Cohort | Testosterone  Free Testosterone Estradiol  SHBG | 137/3,436 | CRC | Testosterone and estradiol: single LC–MS/MS; SHBG: chemiluminescent immunoassays | Age, BMI, smoking status, physical activity, duration of smoking, smoking exposure, alcohol, diabetes, HDL, TG, and history of cancer |
| Chan et al. 2018 | Australia | Cohort | Testosterone  Estradiol SHBG | 48/1,526 | CRC | Testosterone and estradiol: single LC–MS/MS; SHBG: Two-site immunometric chemiluminescent assay on an IMMULITE 2000 instrument | Age, marital status, occupation, smoking, alcohol consumption, leisure time physical activity, BMI, and diabetes |
| Peila et al. 2020 | The United Kingdom | Cohort | Testosterone Estradiol SHBG | Testosterone: 1,925/203,623  Estradiol:  154/17,804  SHBG: 1,788/188,316 | Colon | Testosterone and estradiol: two-step and one-step competitive analysis respectively; SHBG: two-step sandwich immunoassay | Adjusted for age, ethnicity, education, smoking status, pack-years, alcohol intake, BMI, waist circumference, red and process meat consumption, C-reactive protein, insulin growth factor 1 (IGF1), diabetes status, calcium, folate, vitamin D, physical activity, family history of colorectal cancer, ever screened for colorectal cancer and corrected for regression dilution |
| Dimou et al. 2021 | The United Kingdom | Cohort | Free Testosterone | 868/171,455 | Colon | Chemiluminescent immunoassay | Waist circumference, total physical activity, height, alcohol consumption frequency, smoking status and intensity, frequency of red and processed meat consumption, educational level, regular aspirin/ibuprofen use, ever use of hormone replacement therapy, circulating levels of C-reactive protein, glycated hemoglobin, and IGF-1 |
| Watts et al. 2021 | The United Kingdom | Cohort | SHBG | 1,047/182,608 | CRC | Chemiluminescent immunoassay | Townsend deprivation score, ethnic group, height, body mass index, cigarette smoking, alcohol consumption, and total physical activity and corrected for regression dilution bias |