



ABSENCE OF EXCESS BODY FATNESS

VOLUME 16

This publication represents the views and expert opinions of an IARC Working Group on the Evaluation of Cancer-Preventive Interventions, which met in Lyon, 5–12 April 2016

LYON, FRANCE - 2018

IARC HANDBOOKS OF
CANCER PREVENTION

2.2.10 *Cancer of the breast in men*

Breast cancer in men is uncommon, with an incidence that is often cited as being less than 1% of that for breast cancer in women. Risk factors for breast cancer in men include Klinefelter syndrome, a rare hereditary condition characterized by a chromosomal abnormality of 46 XXY karyotype with associated hormonal alterations, and gynaecomastia, a condition linked with excess estrogen. Like for breast cancer in women, risk is likely to be mediated through hormonal mechanisms.

The single largest study of the association of BMI with breast cancer in men is the Male Breast Cancer Pooling Project, a consortium of 11 case-control studies and 10 cohort studies involving 2405 cases (1190 from case-control studies and 1215 from cohort studies) and 52 013 controls ([Brinton et al., 2014](#)).

(a) *Adult body mass index*

BMI at baseline was associated with a small but significant positive association between increased BMI and risk of male breast cancer. However, this association was observed only with case-control studies (OR per 5 kg/m², 1.24; 95% CI, 1.12–1.38), whereas the risk estimates based on cohort studies were not significant (OR per 5 kg/m², 1.11; 95% CI, 0.97–1.28).

(b) *Body mass index at earlier ages*

Recalled BMI at age 18–21 years (based on six cohort studies) showed no association with risk of male breast cancer (OR per 5 kg/m², 1.05; 95% CI, 0.80–1.38).

Reference

Brinton LA, Cook MB, McCormack V, Johnson KC, Olsson H, Casagrande JT, et al.; European Rare Cancer Study Group (2014). Anthropometric and hormonal risk factors for male breast cancer: Male Breast Cancer Pooling Project results. *J Natl Cancer Inst*, 106(3):djt465. doi:[10.1093/jnci/djt465](https://doi.org/10.1093/jnci/djt465) PMID:[24552677](https://pubmed.ncbi.nlm.nih.gov/24552677/)