Table 1: Systematic review of selenium for the prevention of cancer

Source: Gabriele Dennert, CAM-Cancer Consortium. Selenium for cancer prevention [online document]. 20th October 2013.

First author year (reference)	Number/types of studies Primary outcomes Number of participants included	Main outcomes	Inclusion criteria	Main results/conclusion	Comments
Dennert *et al*. 2011 (19)	Six RCTs. Primary outcomes: - liver cancer: three RCTs (23, 31-34);* - prostate cancer: one RCT (25); - non-melanoma skin cancer: two RCTs (35, 36). Participants: 43, 408 (94% men).	Cancer incidence	RCTs. Randomisation of individuals; trials with geographical randomisation were excluded. Adults at risk of neoplastic disease. Selenium supplementation at any dose or route of administration for a minimum of four weeks versus placebo or no intervention. Trials using combinations with other substances, with no arm testing for selenium alone, were excluded.	'There was no convincing evidence that selenium supplementation can prevent non-melanoma skin cancer or liver cancer in women or men with prostate cancer. The results of the Nutritional Prevention of Cancer Trial (NPCT) raised concerns about possible harmful effects of selenium supplements.'	The risk of bias was considered low for the trials investigating non-melanoma skin cancer and prostate cancer. It was considered unclear for the three trials on liver cancer.
Lee *et al*. 2011 (20)	Nine RCTs. Primary outcomes: - liver cancer: five RCTs (23, 31-34, 37, 38);* - prostate cancer: one RCT (25); - skin cancer: three RCTs (35, 36, 39). 153, 528 participants (gender not reported).	Cancer incidence	RCTs. Selenium supplementation administered singly, not in combination with other antioxidant supplements; combination with non-antioxidants was allowed. Comparison with placebo group.	Overall preventive effect in meta-analyses of nine RCTs: RR=0.76; (95% CI= 0.58-0.99); no preventive effect on six of the seven types of cancer included in meta-analysis (colorectal, oesophageal, stomach, lung, prostate, non-melanoma skin cancer); reduced risk of liver cancer RR 0.55 (95% CI=0.41-0.74).	Five RCTs were considered to be of 'low quality', three RCTs were considered to be of 'high quality'.

RCTs: randomised controlled trials

RR: relative risk

CI: confidence interval

* Trial data published in several articles