

---

[Proc Amer Assoc Cancer Res, Volume 45, 2004]

---

## **Epidemiology 1: Viral, Bacterial, and Dietary Exposures**

### **Abstract #491**

# **Meat and fat intake and colorectal cancer risk: A pooled analysis of 14 prospective studies**

**Eunyoung Cho, Stephanie A. Smith-Warner for the Pooling Project of Prospective Studies of Diet and Cancer Investigators**

Brigham and Women's Hospital and Harvard Medical School, Boston, MA and Harvard School of Public Health, Boston, MA

Relatively high red meat and fat intakes have been hypothesized to increase the risk of colorectal cancer. However previous epidemiologic studies on meat and fat intake and colorectal cancer risk have been inconclusive. We therefore examined the association in a pooled analysis of the primary data from 14 prospective follow-up studies from North America and Europe. Meat and fat intake was assessed using a validated food-frequency questionnaire in each study at baseline. We calculated study-specific relative risks and pooled them using a random-effects model. During follow-up of 725,258 women and men over a maximum of 5 to 20 years in the studies, 7,743 incident cases of colorectal cancer were documented. Greater intake of either red meat (excluding processed meat) or processed meat was not related to colorectal cancer risk. The pooled multivariate relative risks (RRs) of colorectal cancer were 1.00 (95% CI 0.92-1.08) for each 90g (approximately 3 oz)/d increase of red meat and 1.05 (95% CI 0.96-1.15) for each 30g/d increase of processed meat. However, intake of poultry and seafood was related to a reduced risk of colorectal cancer (RR= 0.88 [95% CI 0.77-1.00] for each 90g/d increase, P value for heterogeneity=0.04). The RRs for colorectal cancer for each 45g/d increase were 0.92 (95% CI 0.83-1.02) for poultry and 0.91 (95% CI 0.83-0.99) for seafood. Intakes of total, saturated, monounsaturated, and polyunsaturated fats were not appreciably associated with colorectal cancer risk. In conclusion, these prospective data do not support a positive association between higher red meat and fat intake and colorectal cancer risk. Higher intake of poultry and fish may be associated with a lower risk of colorectal cancer.