disease recurrence and overall survival in this patient group.

The researchers discovered two significant associations. The first was between high *CXCR4* expression in specimens originating from patients in the earlier stages of CRC and increased risk of local recurrence and/or metastasis (analyzed over a median follow-up time of 28 months). The second was between high *CXCR4* expression in primary tumor specimens taken from later-stage CRC patients and a reduced overall median survival time (9 months compared with 23 months for patients with low *CXCR4* expression). It also emerged that *CXCR4* expression was significantly greater in liver metastases than in the primary CRC tumors.

The authors conclude that *CXCR4* is differentially expressed in CRC and that its expression in primary CRC tumors is associated with incidences of recurrence and survival and, additionally, liver metastasis. The study adds support to the 'seed and soil' hypothesis of metastasis, i.e. that there are homing signals that facilitate tumor-cell metastasis to specific organs. The *CXCR4* receptor may hold potential as a new target for pharmacological-based CRC therapy.

Original article Kim J *et al.* (2005) Chemokine Receptor *CXCR4* Expression in Colorectal Cancer Patients Increases the Risk for Recurrence and for Poor Survival. *J Clin Oncol* **23:** 2744–2753

Dietary fiber and *Lactobacillus casei*: role in colorectal cancer prevention?

The rising incidence of colon cancer in Japan has been blamed on changes in diet, which correspond to the increasingly Westernized lifestyle. Since dietary fiber is thought to help prevent colorectal cancer, Ishikawa *et al.* carried out a clinical trial to examine the association between dietary fiber and colorectal cancer incidence among Japanese individuals. In addition, they asked whether the risk of developing these tumors was reduced by *Lactobacillus casei,* which reduces the level of mutagens in stool.

The investigators recruited 398 subjects aged 40–65 years who had had at least two colorectal tumors removed within the previous 3 months. All received dietary instruction, and were randomly assigned to a regular intake of wheat bran biscuits, *L. casei* preparation, or both. A control group received dietary instruction only.

Colonoscopic examination at 2 years and 4 years follow-up showed no significant difference between the groups in the occurrence of new colorectal tumors. Large tumors, however, were significantly more frequent after 4 years among subjects who received wheat bran than among those who did not (3.7% vs 0.0%, $P<0.01$). Interestingly, *L. casei* administration was associated with a significant decrease in the development of tumors with moderate or severe atypia after 4 years.

In summary, the study does not support the use of dietary fiber supplements to prevent colorectal cancer. The possible mechanism by which *L. casei* suppresses the development of tumors with moderate or severe atypia is the subject of ongoing studies.

Original article Ishikawa H *et al.* (2005) Randomized trial of dietary fibers and Lactobacillus casei administration for prevention of colorectal tumors. *Int J Cancer* [doi: 10.1002/ijc.21115]

Anti-EGFR monoclonal antibody treatment in colorectal cancer

Only a fraction of patients with metastatic colorectal cancer refractory to chemotherapy respond to treatment with the anti-epidermal growth factor receptor (anti-EGFR) monoclonal antibodies cetuximab or panitumumab. Moroni *et al.* investigated whether the clinical response to these agents is associated with molecular changes affecting the *EGFR* gene or other genes in the EGFR pathway.

Tumors were obtained from 31 patients with metastatic colorectal cancer who had either an objective response ($n=10$) or stable or progressive disease ($n=21$) after treatment with cetuximab or panitumumab. *EGFR* copy number was assessed for individual tumor samples by fluorescence *in situ* hybridization. Mutation profiles were also determined for the *EGFR* catalytic domain and downstream genes *KRAS*, *BRAF* and *PIK3CA*.

Most patients with metastatic colorectal cancer who achieved tumor shrinkage with cetuximab or panitumumab had a significantly increased *EGFR* copy number. No correlation