underwent postoperative adjuvant radiotherapy; the remaining 17,169 patients did not receive adjuvant radiotherapy.

Overall survival was significantly improved by adjuvant radiotherapy in patients with stage IC/grade 1 and stage IC/grades 3 and 4 disease ($P < 0.001$ for both). Relative survival of these patients, which was calculated relative to survival of the US female population according to variables such as age at diagnosis and race, also showed statistically significant improvements with adjuvant radiotherapy ($P < 0.001$ and $P = 0.009$). Adjuvant radiotherapy did not significantly improve overall or relative survival in patients with other stages and grades of disease.

These results show a statistical association, but not necessarily a causal relationship, between adjuvant radiotherapy and survival in stage IC disease (grades 1 and 3–4). Further studies are required to identify factors that might be useful in guiding treatment decisions.

Rebecca Ireland

Original article Lee CM *et al.* (2006) Frequency and effect of adjuvant radiation therapy among women with stage I endometrial adenocarcinoma. *JAMA* 295: 389–397

Calcium plus vitamin D₃ supplementation does not reduce risk of colorectal cancer

It is widely believed that increased calcium intake reduces the risk of colorectal cancer and recurrent polyps. One study demonstrated that the protection offered by calcium supplementation was greater in subjects with higher endogenous vitamin D levels. As part of the Women's Health Initiative (WHI) trials investigating the risks and benefits of hormone therapy and dietary modification, Wactawski-Wende *et al.* investigated whether calcium and vitamin D₃ supplementation was beneficial in the prevention of colorectal cancer.

This randomized, placebo-controlled study enrolled 36,282 postmenopausal women from the WHI trials. For a mean duration of 7 years, patients received 500 mg of elemental calcium plus 200 IU of vitamin D₃ twice daily ($n = 18,176$), or placebo tablets twice daily ($n = 18,106$). Baseline demographics were similar between groups.

Invasive colorectal cancer incidence was similar between groups: 168 cases in patients

receiving calcium and vitamin D₃, and 154 cases in patients receiving placebo. Colorectal cancers did not differ between groups in location, histology, grade, stage or size. No significant interactions were found between risk of colorectal cancer and baseline characteristics including age, BMI, race, level of physical activity, and total daily intakes of calcium and vitamin D₃. Baseline serum vitamin D levels did not modify the effect of calcium plus vitamin D₃.

The authors conclude that supplementation with calcium and vitamin D₃ for 7 years provided no protection against colorectal cancer. The ongoing extension WHI study will identify whether beneficial effects occur in later years.

Rebecca Ireland

Original article Wactawski-Wende J *et al.* (2006) Calcium plus vitamin D supplementation and the risk of colorectal cancer. *N Engl J Med* 354: 684–696

Risk of smoking-related lung cancer is affected by race and ethnicity

In the US, the incidence of lung cancer varies greatly among different racial and ethnic groups. A prospective analysis of 183,813 participants from the Multiethnic Cohort Study has shown that the effect of cigarette smoking—the greatest risk factor for lung cancer—also varies between these groups.

Between baseline (1993–1996) and 2001, 1,979 participants (1,135 male) developed lung cancer. Among men, African Americans and Native Hawaiians experienced far greater incidence of lung cancer than Japanese Americans, Latinos and whites. Among women, African Americans, Native Hawaiians and whites experienced incidences that were similarly high to each other.

Smoking habits differed with race/ethnicity, and the effect of cigarette smoking on risk of lung cancer differed significantly between the different racial/ethnic groups, although this was not the case for those who smoked >30 cigarettes/day. African Americans had the greatest risk of lung cancer at all levels of smoking studied. Interestingly, there were no significant race/ethnicity-related differences in lung cancer incidence in participants who had never smoked. Suspected risk factors including diet and occupation did not explain the variability in the relationship between smoking and lung