on subsequent rounds. A 'natural' control group of women was derived from different administrative regions of the country, where no mammography screening program had been implemented. These women were followed up from the date of their assigned 'pseudo invitations'. Historical control groups corresponding to both the study group and the natural control group were also created.

Before the screening program, breast cancer mortality was higher in Copenhagen than in the rest of Denmark, possibly because of regional differences in risk factors. During the screening period, however, breast cancer mortality in Copenhagen fell to below the level recorded elsewhere (relative risk 0.80, 95% CI 0.68–0.94). Adjusting for age, time period and region, breast cancer mortality in Copenhagen during the screening period was 25% lower than would have been expected without screening, and the corresponding figure for women who attended screening was 37%. Importantly, no severe negative side effects were observed among screening participants.

Original article Olsen AH *et al.* (2005) Breast cancer mortality in Copenhagen after introduction of mammography screening: cohort study. *BMJ* [doi: 10.1136/bmj.38313.639236.82]

Tumor antigen vaccines in follicular lymphoma

A recent study by Weng and co-workers has investigated the effects of idiotype (Id) vaccination in lymphoma patients. This approach is based on custom vaccines derived from a patient's own tumor.

The study included 136 patients with follicular lymphoma who received Id vaccination following chemotherapy. The patients' humoral immune response to the vaccine was assessed by comparing the anti-Id titer in postvaccine and prevaccine serum samples. T-cell proliferation assays were used to assess the cellular immune response. In addition, the investigators carried out immunoglobulin G Fc receptor (FcγR) genotyping, to assess the predictive value of FcγR polymorphism.

An idiotype-specific humoral immune response was detected in 48 (35%) patients; progression-free survival (PFS) after the last chemotherapy dose was significantly longer in these patients than in those who did not develop anti-Id antibodies. PFS was also longer in patients with FcγRIIIa 158 valine/valine genotype than in those with heterozygous valine/phenylalanine or homozygous phenylalanine/phenylalanine genotypes. Multivariate analysis showed that humoral immune responses and valine/valine genotype were both independent positive predictors for longer PFS. Surprisingly, a cellular immune response, detected in a fifth of all patients, showed no relationship with clinical outcome.

Weng *et al.* conclude that a humoral immune response to idiotype vaccination is beneficial, and that the antitumor effect is mediated by FcγR-bearing cells. They note that the efficacy of this therapeutic approach might be improved, therefore, by enhancing the antibody response.

Original article Weng W-K *et al.* (2004) Clinical outcome of lymphoma patients after idiotype vaccination is correlated with humoral immune response and immunoglobulin G Fc receptor genotype. *J Clin Oncol* **22:** 4717–4724

Defining risk in patients with renal-cell carcinoma

In 2002, Motzer *et al.* proposed a prognostic model for survival in patients with previously untreated renal-cell carcinoma, based on patient characteristics and biochemical parameters. In their recent study, Mekhail and colleagues from the Cleveland Clinic Foundation have validated the model and added two further prognostic factors.

The investigators analyzed the records of 308 patients with metastatic renal-cell carcinoma who were included in clinical trials between 1987 and 2002. All patients were treated with immunotherapy and/or chemotherapy and most had prior nephrectomy. The team discovered that four of the five prognostic factors in the Motzer *et al.* model—time from diagnosis to treatment, hemoglobin, serum lactate dehydrogenase, and corrected serum calcium—were independent predictors of survival in these patients. The corresponding favorable, intermediate and poor-risk groups had median survival times similar to those reported in Motzer *et al.*'s analysis.

Having considered an array of potential prognostic factors, Mekhail *et al.* showed that