outcomes when tested in 225 tumor-adjacent tissue samples from the validation set.

This profiling technique could be used to identify high-risk patients with early HCC who might benefit from intensive management strategies. That the gene-expression signatures were found in tissue adjacent to tumors, rather than in tumor tissue, indicates that late recurrence might represent a second primary hepatic tumor in patients at high risk of recurrence, rather than recurrence of the initial tumor.

Original article Hoshida Y *et al.* (2008) Gene expression in fixed tissues and outcome in hepatocellular carcinoma. *N Engl J Med* **359:** 1995–2004

DNA stool tests: an alternative to colonoscopy for colorectal cancer screening?

Fecal occult blood testing (FOBT) has been proposed as an alternative to colonoscopic screening for the detection of colorectal cancer, but requires multiple stool samples because occult bleeding is intermittent. By contrast, DNA markers from potentially cancerous cells are thought to be shed continuously. Thus stool DNA testing requires just one sample and offers an alternative, simple and noninvasive approach to screening. As the reported accuracy of stool DNA testing varies, Ahlquist and colleagues compared the effectiveness of this screening method with FOBT.

The multicenter, prospective study included 3,764 healthy adults (aged 50–80 years) at average risk for colorectal cancer who underwent colonoscopy. Participants sent stool samples (including smeared Hemoccult® and HemoccultSensa® [both of Beckman Coulter, Fullerton, CA] FOBT cards) by express mail to the Mayo Clinic in Rochester, MN, for analysis. Colonoscopy detected relevant neoplasms in 290 patients. Stool DNA test 1, a precommercial 23-marker assay, was carried out in 2,497 patients and detected 20% of cancers and precancerous polyps, compared with 11% detection by Hemoccult® and 21% by HemoccultSensa®. Stool DNA test 2, which assesses three broadly informative markers, was used for a subgroup of 217 patients, and detected 46% of cancers and precancerous polyps, compared with 16% detection by Hemoccult® and 24% by HemoccultSensa®.

The researchers point out that the increased sensitivity of stool DNA test 2 was particularly noticeable for adenomas, although this test did produce more false-positive results than did other methods.

Original article Ahlquist DA *et al.* (2008) Stool DNA and occult blood testing for screen detection of colorectal neoplasia. *Ann Intern Med* **149:** 441–450

Decline in CA19-9 levels correlates with clinical outcome in pancreatic cancer

Serum levels of carbohydrate antigen 19-9 (CA19-9) are elevated in ~75% of patients with pancreatic cancer, and declines in CA19-9 levels correlate with prolonged survival. Wong and colleagues, therefore, compared CA19-9 with objective radiographic response, which is currently widely used as a possible marker of clinical outcomes in pancreatic cancer.

The investigators conducted a retrospective analysis of data from two phase II chemotherapy trials that both involved gemcitabine and cisplatin; one study also involved bevacizumab. Participants were 75 patients with metastatic pancreatic cancer. Decline in serum CA19-9 levels correlated significantly with clinical outcomes: for patients with no decline in CA19-9 levels, median time to disease progression and overall survival were 1.8 months and 3.5 months, respectively, whereas for those with a decline >75%, median values were 6.7 months and 12.2 months, respectively. Although an objective radiographic response to therapy was also a useful predictor of both time to progression and overall survival in the pooled population, CA19-9 decline seemed to be equally good. Correlations between CA19-9 decline and both outcome parameters were highly significant. Maximum CA19-9 decline also correlated significantly with the best objective radiographic response.

Radiographic determination of tumor margins can be difficult in pancreatic cancer. Measurement of CA19-9 levels may provide a simple and cost-effective surrogate end point for survival in studies of pancreatic cancer therapies.

Original article Wong D *et al.* (2008) Serum CA19-9 decline compared to radiographic response as a surrogate for clinical outcomes in patients with metastatic pancreatic cancer receiving chemotherapy. *Pancreas* **37:** 269–274