capsule-measured GET. The diagnostic accuracy of capsule-measured GET to distinguish gastroparetic from nongastroparetic individuals was equivalent to that of 4 h-GES (0.83 versus 0.82).

The authors point out that, although different gastric functions are measured by the two techniques, capsule-measured GET and 4 h-GES are closely related, since >90% of the meal undergoing digestion must leave the stomach before the capsule can pass into the duodenum.

The SmartPill® seems to compare well with GES in measurements of GET and could provide a radiation-free alternative to scintigraphy.

Original article Kuo B *et al.* (2008) Comparison of gastric emptying of a nondigestible capsule to a radio-labelled meal in healthy and gastroparetic subjects. *Aliment Pharmacol Ther* **27:** 186–196

Gene-expression profiles might predict response of rectal cancers to therapy

Neoadjuvant chemoradiotherapy is accepted as the standard treatment for locally advanced rectal cancer. Results with this therapy vary, however, from full remission to complete resistance. Prediction of therapeutic response in individuals has proved difficult. Many potential variables have been tested but none has yet correlated with histopathological response. Gene-expression analysis is a new technique that has already identified some potentially useful markers.

In this study, Rimkus *et al*. assessed whether microarray generation of genetic signatures from biopsy specimens can identify markers that predict a histopathological response to treatment. Samples were taken before treatment from individual patients with locally advanced rectal carcinomas.

Gene-expression profiles were generated from 43 biopsy specimens and control tissue. An expression signature of 42 genes that could discriminate responders from nonresponders was identified. These genes encoded proteins that were transcription factors, or were associated with transport in and out of cells, or involved in the regulation of apoptosis. A 'leave-one-out' cross-validation technique showed that patients could be classified as responders only if their profile included at least 71% of the identified response gene markers. Profiles of nonresponders had to include 86% of the nonresponse gene markers.

The authors conclude that use of gene signatures might be feasible to predict response to neoadjuvant chemoradiotherapy in patients with rectal carcinoma, but validation remains necessary.

Original article Rimkus C *et al.* (2008) Microarray-based prediction of tumor response to neoadjuvant radiochemotherapy of patients with locally advanced rectal cancer. *Clin Gastroenterol Hepatol* **6:** 53–71

Sex-related differences in Crohn's disease among pediatric patients

Identification of differences in Crohn's disease between male and female patients could provide useful insights into the etiology, pathophysiology and genetics of the disease. Gupta and colleagues, therefore, conducted a multicenter, retrospective study in the US to examine sex-related differences in the presentation and course of Crohn's disease in 989 pediatric patients (mean age at diagnosis 11.5 years; 566 boys and 423 girls) enrolled in the Pediatric IBD Consortium Registry.

The median follow-up period after initial diagnosis of IBD was 2.8 years. No differences between girls and boys were observed for age at diagnosis of IBD, initial classification of disease, location of disease at diagnosis, or prevalence of granuloma on initial histology. However, girls had a higher prevalence of mouth sores at symptom onset and of hypoalbuminemia at the time of diagnosis, and a higher proportion of girls than boys had abnormal levels of antibodies against *Escherichia coli* outer-membrane porin. The risk of developing erythema nodosum or pyoderma gangrenosum was also increased in girls compared with boys, and girls were more likely than boys to be treated with ciclosporin—a second-line therapy. By contrast, boys had an increased risk of developing growth failure compared with girls.

These findings, in combination with those of previous reports, suggest that girls with Crohn's disease have a more-severe disease course but a lower risk of developing growth failure than boys; prospective longitudinal studies are warranted to confirm and further explore these differences.

Original article Gupta N *et al.* (2007) Gender differences in presentation and course of disease in pediatric patients with Crohn disease. *Pediatrics* **120:** e1418–e1425