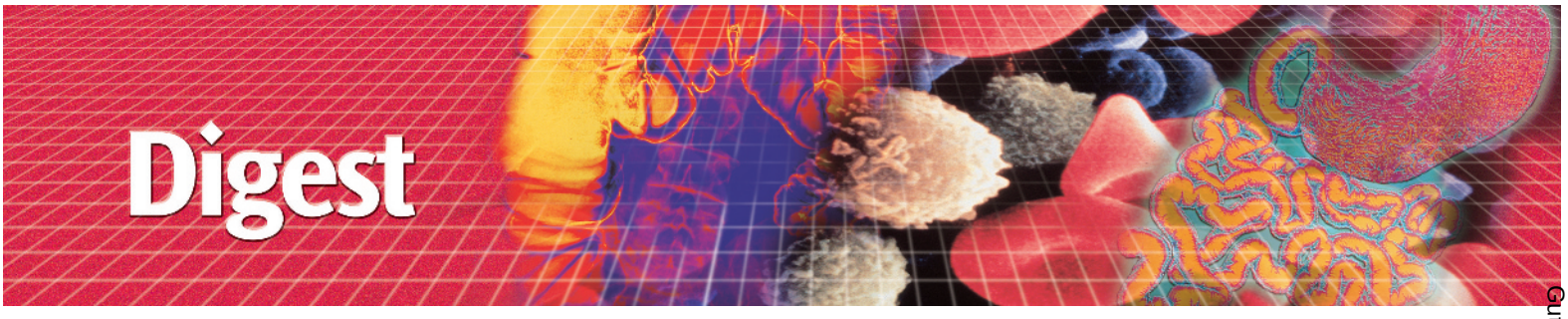
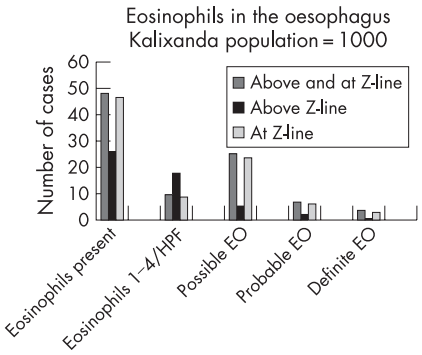


Robin Spiller and Emad El-Omar, *Editor and Deputy Editor*



Number of subjects in the Kalixanda study population with eosinophils present in the oesophagus, with low eosinophil count/high-power field (HPF) (ie, 1–4) and possible, probable or definite eosinophilic oesophagitis (EO).

PREVALENCE OF OESOPHAGEAL EOSINOPHILS AND EOSINOPHILIC OESOPHAGITIS IN ADULTS: THE POPULATION-BASED KALIXANDA STUDY

Eosinophilic oesophagitis is an important condition, but its prevalence in the general population remains unknown. Ronkainen *et al* determined the prevalence of eosinophilic oesophagitis and its association with upper gastrointestinal symptoms and gastro-oesophageal reflux disease in an adult Swedish population (the Kalixanda study). A random sample of 2860 adults was surveyed using the validated Abdominal Symptom Questionnaire. An upper gastrointestinal endoscopy was performed in a representative sample of 1000 of the responders to the questionnaire. Eosinophils were present in 48 subjects (4.8%, 95% CI 3.5 to 6.1), just over half of whom had no troublesome reflux symptoms. Definite eosinophilic oesophagitis was present in four subjects (0.4%, 95% CI 0.01 to 0.80) (see fig). Erosive oesophagitis (odds ratio (OR) = 2.99) and absence of dyspepsia (OR = 0.23) and *Helicobacter pylori* infection (OR = 0.41) were independent predictors for the presence of eosinophils in the oesophagus. This study provides the first robust current community prevalence estimates, which appear higher than previously appreciated.

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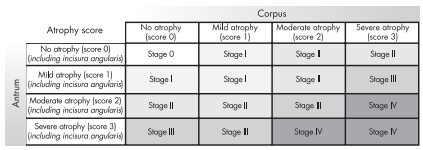

	Atrophy score	Corpus: No atrophy (score 0)	Corpus: Mild atrophy (score 1)	Corpus: Moderate atrophy (score 2)	Corpus: Severe atrophy (score 3)
Antrum	No atrophy (score 0) (including incisura angularis)	Stage 0	Stage I	Stage I	Stage II
Antrum	Mild atrophy (score 1) (including incisura angularis)	Stage I	Stage I	Stage I	Stage III
Antrum	Moderate atrophy (score 2) (including incisura angularis)	Stage II	Stage II	Stage II	Stage IV
Antrum	Severe atrophy (score 3) (including incisura angularis)	Stage III	Stage II	Stage IV	Stage IV

The OLGA gastritis staging system.

GASTRITIS STAGING IN CLINICAL PRACTICE: THE OLGA STAGING SYSTEM

Existing gastritis classification systems lack simplicity and prognostic information. An international group, the Operative Link on Gastritis Assessment (OLGA) proposed the OLGA staging system for reporting gastric histology. This staging system integrates the atrophy score and the atrophy topography (see fig). Rugge *et al* tested in a prospective, cross-sectional study whether OLGA staging consistently stratified patients according to their cancer risk and provided clear prognostic/therapeutic information. OLGA staging for gastric cancer risk (0–IV) and gastritis grading (overall score of the inflammatory infiltrate, grade 1–4) were applied to 439 prospectively-enrolled, consecutive patients with dyspepsia who underwent endoscopy with standardised biopsy sampling. All significant lesions were recorded. Results were presented as stage, including antral (A) and corpus (C) atrophy scores, and *Helicobacter pylori* status (eg, A = 3; C = 2: stage IV; Hp+ve). Benign conditions (including duodenal ulcers, $p<0.001$) consistently clustered in stages 0–II, whereas all neoplastic (invasive and non-invasive) lesions clustered in stages III–IV ($p<0.001$). The OLGA staging system combined with *H pylori* status provides useful prognostic data that could aid the treatment and management of patients.

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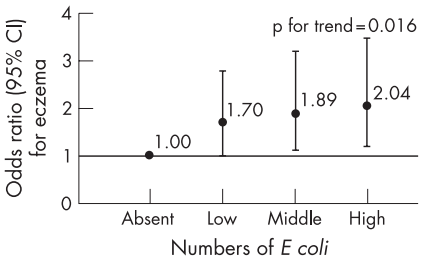

Odds ratio for developing eczema for low (<8.86 $\log_{10}$), middle (8.86 to 9.75 $\log_{10}$) and high numbers of *E coli* (>9.75 $\log_{10}$) colony forming units/g faeces.

NEONATAL FAECAL *ESCHERISCHIA COLI* AND *CLOSTRIDIUM DIFFICILE* ASSOCIATED WITH DEVELOPMENT OF ECZEMA

The bacterial flora in neonates is believed to play an important role in the development of the immune system. This study is part of a large prospective birth cohort study in the Netherlands examining the causes of atopy. Stool samples were analysed for bacterial DNA to assess total bacterial numbers and numbers of *Bifidobacteria* spp, *Bacteroides fragilis*, *Escherischia coli*, *Clostridium difficile* and *Lactobacillus* spp. At 1 month old most infants had detectable *Bifidobacteria*, *E coli* and *B fragilis* but only one third had *Lactobacilli* spp and one quarter had *C difficile*. By 2 years old, 30% had experienced eczema (defined as an itchy rash, excluding nappy rash or rash around the eyes/scalp). There was an increased risk of eczema in those with *C difficile* and *E coli*, which showed a dose–response (see fig). The cause of the link is uncertain, but could reflect bacterial induced alterations in gut permeability leading to a breach of immune tolerance.

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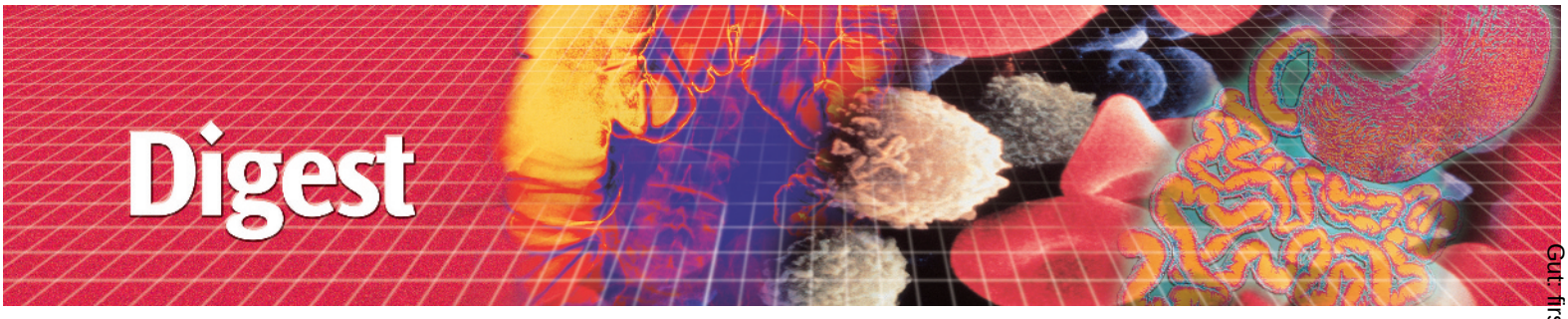
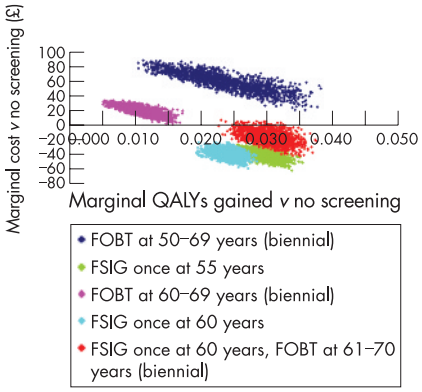
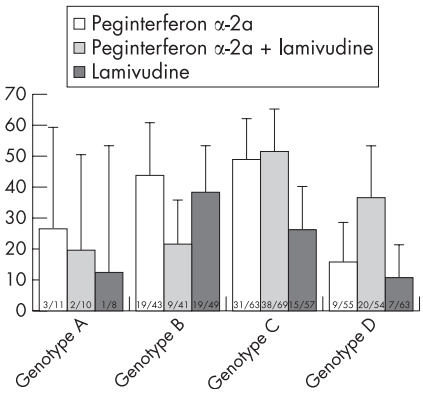
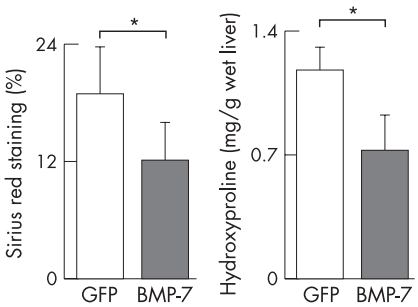




Cost-effectiveness of screening options *vs* no screening. FOBT, faecal occult blood test; FSIG, flexible sigmoidoscopy.



Impact of genotype on response rate (ALT normalisation and HBV DNA <20 000 copies/ml) at 24 weeks.



The degree of hepatic fibrosis was quantified in bone morphogenetic factor 7 (BMP-7) rats by measuring the area positive for Sirius red staining and hydroxyproline content. Rats co-infected with LNL-green fluorescent protein (GFP) were used as controls.

MODELLING COST EFFECTIVENESS OF COLORECTAL CANCER SCREENING

Colorectal cancer (CRC) is expensive both in healthcare costs and human suffering. As most European countries start to develop population-based screening programmes, there are considerable uncertainties about the optimal methods and timing for the screening test. This paper models the impact of screening by faecal occult blood testing (FOBT) and/or flexible sigmoidoscopy using existing data. The model shows that at best deaths from CRC could be reduced by 33%. As there is considerable uncertainty about many parameters in the model, including the rates of transition from adenoma to carcinoma, the authors produce a range of possible values for each screening method. Flexible sigmoidoscopy once at 60 years, together with biennial FOBT from age 61–70, appears the most cost–effective (see fig). However, there is considerable uncertainty in the likely gain in QALY (quality adjusted years) compared with no screening and plainly there is a need for more adequate data to allow better prediction of the optimum techniques.

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IMPORTANCE OF HEPATITIS B VIRUS (HBV) GENOTYPE FOR PREDICTING RESPONSE TO PEGINTERFERON α-2A, LAMIVUDINE OR COMBINATION TREATMENT

HBV e antigen (HBVeAg) negative infection, which is an important cause of death from cirrhosis and hepatoma, is characterised by progressive, silent liver damage associated with continued viral replication. While the success of antiviral treatment for HBeAg-positive patients is associated with low serum HBV DNA levels and high serum alanine aminotransferase (ALT), whether this is true for patients who are HBVeAg negative is uncertain. The current paper analysed predictors of response in a randomised trial of 537 such patients, treated with either peginterferon α-2a and/or lamivudine. As expected, high ALT, female gender, younger age and low levels of HBV DNA all predicted better response. The new finding was that geneotype D did significantly worse with either monotherapy. Overall, combination therapy was not significantly better than monotherapy, but subgroup analysis showed the combination improved genotype D response from 16% to 37% . If these findings are replicated, they suggest that genotype should strongly influence choice of treatment for HBVeAg negative patients.

See p 699

ADENOVIRUS-MEDIATED EXPRESSION OF BMP-7 SUPPRESSES THE DEVELOPMENT OF LIVER FIBROSIS IN RATS

Accumulation of extracellular matrix materials is the basis of liver cirrhosis and this is particularly driven by transforming growth factor β (TGFβ). The fibrogenic effects of TGFβ could be antagonised by bone morphogenetic factor 7 (BMP-7), which is a member of the TGFβ superfamily and has essential roles during embryogenesis. Kinoshita *et al* examined whether adenovirus-mediated overexpression of BMP-7 (Ad-BMP-7) antagonised the effect of TGFβ in vitro and in vivo. They used primary cultured rat stellate cells and the LX-2 human stellate cell line, in addition to a liver fibrosis model induced by repetitive intraperitoneal injection of thioacetamide. Induction of BMP-7 by Ad-BMP-7 infection decreased the expression of collagen 1A2 messenger RNA and smooth muscle α-actin via Smad 1/5/8 phosphorylation. In rats administered Ad-BMP-7 via the tail vein, hydroxyproline content and the areas stained by Sirius red dye in the liver were significantly reduced compared with controls (see fig). The approach is hoped to ultimately contribute towards gene therapy for hepatic fibrosis.

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