for the propensity score this remained significantly higher (HR = 2.93, 95% CI 1.42, 6.02) for those with concurrent aspirin, but was non-significant in those with no concurrent aspirin (HR = 1.48, 95% CI 0.76, 2.89). In contrast, in the SCCS the relative incidence (RI) of GI hospitalisation for COX-2 s vs tNSAIDs was 0.73 (0.604, 0.998) in those with no concurrent ulcer healing drugs. **CONCLUSIONS:** Traditional cohort analysis methods only weakly adjust for confounding, especially confounding by indication. Case-only designs give results more akin to trials. Interpretation still requires care as each design makes crucial assumptions.

PGI2

WORK PRODUCTIVITY IN PRIMARY CARE PATIENTS CONSULTING WITH COMPLAINTS OF UPPER GASTROINTESTINAL SYMPTOMS: ESTIMATES FROM THE DANISH RESPONSE STUDY

Malmberg I[1], Meineche-Schmidt V[2], Christensen E[3], Bytzer P[4]
[1]AstraZeneca, Albertslund, Denmark, [2]Copenhagen University, Copenhagen, Denmark, [3]Bispebjerg Hospital, Copenhagen, Denmark, [4]Køge University Hospital, Køge, Denmark

OBJECTIVES: To estimate work productivity in Danish patients consulting primary care physicians with upper gastrointestinal (UGI) symptoms and the effect of acid-suppressive therapy. **METHODS:** The RESPONSE study was a randomized, double-blind, placebo-controlled primary care study focusing on proton pump inhibitor treatment of acid-related UGI symptoms. A secondary objective assessed improvement in productivity loss following 2 weeks of esomeprazole 40 mg once daily or placebo. Work productivity due to UGI symptoms was measured using the Work Productivity and Activity Impairment questionnaire specific for patients with UGI symptoms (WPAI:UGIS) and a Danish national average wage rate was applied to calculate the value of lost time. Treatment effect on work productivity loss was tested using Kolgomorov-Smirnov test. **RESULTS:** A total of 805 patients completed the study; 423 patients reported being employed at baseline and were included in the analysis. The estimated total cost of average work productivity loss in the 7 days preceding contact with the physician was €316 (DKK 2355) per patient (95% confidence interval [CI]: €277, €355). This was equivalent to 10.5 working hours/week, and increased with increasing severity of UGI symptoms at baseline. Of the total loss, absence from work contributed 2.2 hours/week (95% CI: 1.6, 2.8) and reduced productivity while at work (presenteeism) 8.3 hours/week (95% CI: 7.3, 9.3). After 2 weeks of treatment, the mean improvement in work productivity per week was significantly higher for both absenteeism (1 hour vs. 0.1 hour, $p < 0.05$) and presenteeism (5.3 hours vs. 4.3 hours, $p < 0.05$) in patients treated with esomeprazole vs placebo. The economic value of the incremental gain in productivity with esomeprazole vs. placebo was €45/week. **CONCLUSIONS:** The results indicate that acid-related UGI symptoms in Danish primary care patients represent a significant economic burden in terms of lost productivity, which can be addressed with acid-suppressive therapy. Supported by AstraZeneca, Albertslund, Denmark.

PGI3

INTRAVENOUS (IV) PROTON PUMP INHIBITORS (PPIS) FOR THE TREATMENT OF PEPTIC ULCER BLEEDING (PUB)

Edwards SJ, Gray J, Borrill J
AstraZeneca UK Ltd, Luton, UK

OBJECTIVES: To evaluate the efficacy of iv PPIs in treating PUB. **METHODS:** Randomised controlled trials (RCTs) identified in a Cochrane systematic review of CENTRAL, EMBASE and MEDLINE (1996 to November 2004) were supplemented with an update to December 2008 and then searched for RCTs with consistent pre-randomization endoscopic haemostatic treatment (EHT) that compared any iv PPI with either placebo (including no treatment) or a histamine-2-receptor antagonist (H_2RA). Data on overall mortality, rebleeding, emergency surgery and further EHT were extracted and re-analysed if not analysed by intention-to-treat. Summary effect estimates (Relative Risk, RR) were calculated by meta-analysis using a fixed-effects model by the Mantel-Haenszel method. Quality of RCTs included in the meta-analysis was judged based on an assessment of the method of randomisation and concealment of allocation. Sensitivity analysis was conducted using the DerSimonian and Laird random-effects model. **RESULTS:** Of the 251 papers identified, 10 were suitable to provide data for analysis (4 PPI vs H_2RA; 6 PPI vs placebo). When compared with either an H_2RA or placebo, PPIs significantly reduced rebleeding (RR 0.53; 95% Confidence Interval [CI]: 0.41–0.68; $p < 0.00001$), emergency surgery (RR 0.58; 95%CI: 0.43–0.79; $p = 0.0004$) and further EHT (RR 0.49; 95%CI: 0.38–0.64; $p < 0.00001$). There was a non-significant reduction in overall mortality (RR 0.85; 95%CI: 0.59–1.21; $p = 0.35$), which became significant when a single outlier trial was excluded in a post-hoc analysis (RR 0.68; 95%CI: 0.46–0.99; $p = 0.05$). The trial was excluded based on imbalanced patient allocation: substantially more patients with previous PUB were randomised to the placebo arm, and surviving a prior PUB is associated with increased likelihood of surviving a subsequent PUB. The sensitivity analysis using a random-effects model provided results consistent with the primary analysis. **CONCLUSIONS:** Intravenous PPIs have significant benefits over treatment with an H_2RA or placebo for PUB, which may include a significant reduction in overall mortality.

PGI4

SYSTEMATIC REVIEW: THE CLINICAL EFFECTIVENESS OF ANTI-TNF-ALPHA DRUGS IN ADULTS WITH REFRACTORY CROHN'S DISEASE

Assasi N[1], Blackhouse G[1], Xie F[1], Marshall JK[1], Irvine J[2], Gaebel K[1], Robertson D[1], Campbell K[1], Hopkins R[1], Goeree R[1]
[1]McMaster University, Hamilton, ON, Canada, [2]St Michael's Hospital, Toronto, ON, ON, Canada

OBJECTIVES: To determine the clinical effectiveness of three anti-TNF-α agents (infliximab, adalimumab, etanercept) in refractory Crohn's dissease (CD). **METHODS:** An electronic literature search was conducted to identify randomized controlled trials (RCT) and observational studies on CD and anti-TNF-a drugs that were published from 1996–2008 using Medline, EMBASE, PubMed, Wiley's Cochrane Library, and Thomson's BIOSIS Previews. Websites of professional associations were also searched. A random effect pooled analysis was performed when tw0 or more comparable stuides were identified. **RESULTS:** Of 2557 citations identified, the publications related to 13 RCTs and 7 observational studies met the inclusion criteria. All included RCTs had a methodological quality score (Jadad scale) of 3 or more. Included effectiveness trials were largely placebo-controlled. Findings indicate that infliximab is effective in induction and maintenance of clinical response and remission in patients with luminal or fistulizing CD who are resistant or refractory to conventional therapy. Infliximab also reduces the need for surgical resection and hospitalization in CD. Adalimumab was shown to be effective for inducing and maintaining clinical remission in CD patients with secondary non-response to infliximab or who are naive to anti-TNF-α drugs. No statistically significant difference was observed between adalimumab and placebo in terms of fistula improvement or remission rates. However, a significantly higher rate of fistula remission was reported when adalimumab was used as maintenance therapy in one study. A majority of CD patients re-established reduced response after infliximab or adalimumab dose escalation. The results of this review showed that CD patients with secondary non-response to infliximab could benefit from adalimumab therapy. **CONCLUSIONS:** Infliximab and adalimumab have shown a consistent superiority to placebo in induction and maintenance of clinical remission, as well as in reducing the rates of surgery and hospitalization in refractory CD. CD patients who begin to lose their response to anti-TNF-α treatment could benefit from dose escalation.

PGI5

PREDICTORS FOR RESPONSE TO PRUCALOPRIDE IN PATIENTS WITH CHRONIC CONSTIPATION

Dubois D[1], Kerstens R[2], Vandeplassche L[2], Wouters L[3]
[1]PVS Consultancy, Huldenberg, Belgium, [2]Movetis, Turnhout, Belgium, [3]I-Biostat, Hasselt University, Diepenbeek, Belgium

OBJECTIVES: Prucalopride is a selective 5-HT_4 agonist, effective for treatment of chronic constipation, as demonstrated in three pivotal phase III trials and a trial in elderly patients. The aim of this study was to explore if baseline patient characteristics could predict efficacy of prucalopride after four weeks treatment. Two efficacy outcome measures were considered: R1) response defined as an increase from baseline of ≥1 point in patient-reported satisfaction with treatment; R2) response defined as an average of ≥3 spontaneous complete bowel movements (SCBM) per week. **METHODS:** Data from four trials were combined (n = 1256). Univariate associations of baseline characteristics with response were investigated. Stepwise logistic regression was used to build a predictive model and classification trees analysis (CTA) models were constructed on data from a random selection of two-thirds of the patients. The predictive value of the constructed model was evaluated on the remaining one-third using ROC-curve analysis. **RESULTS:** Univariate associations identified 4 covariates strongly associated with R1 (satisfaction with treatment, abdominal pain, laxative use, rectal symptoms) and 10 with R2 (SCBM, CBM, SBM, BM, fewer BM than you like, satisfaction with BM frequency and regularity, abdominal symptoms, laxative use, frequency of BM in preceding six months). The final stepwise logistic regression models contained the same baseline covariates, whereas the CTA-models contained fewer covariates, but had a comparable predictive value (67% positive predictive value, 80% sensitivity and 41% specificity for R1 and 44% positive predictive value, 17% sensitivity and 91% specificity for R2). **CONCLUSIONS:** Self-reported satisfaction with treatment, symptoms, and laxative use at baseline has meaningful predictive value for response to treatment with prucalopride in patients with chronic constipation.

GASTROINTESTINAL DISORDERS – Cost Studies

PGI6

EVALUATION OF RESOURCE UTILIZATION AND ECONOMIC IMPACT OF RECURRENCE FOR INGUINAL HERNIA REPAIR PERFORMED WITH PHS DEVICE VERSUS POLYPROPYLENE MESH UNDER THE BRAZILIAN PRIVATE PAYER PERSPECTIVE

Bastide P, Pontes DAR, Negri MA
Johnson & Johnson Medical Brasil, Sao Paulo, SP, Brazil

OBJECTIVES: To evaluate the direct costs related to recurrence of inguinal hernia repair, in patients who underwent the surgery with PHS versus Polypropylene mesh, under the Brazilian private payer perspective. **METHODS:** A decision model was developed to assess the costs and resource usage for the recurrence of inguinal hernia repair with the PHS versus Polypropylene mesh under the private payer perspective,