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The Committee on Enzymes of the Scandinavian Society of Clinical Chemistry and Clinical Physiology. Recommended method for the determination of gammaglutamyltransferase in blood. *Scand J Clin Lab Invest* 1976;36 : 119 -125

## Books and Other Monographs

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Osler AG. *Complement: mechanisms and functions*. Englewood Cliffs: Prentice-Hall, 1976.

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American Medical Association Department of Drugs. *AMA drug evaluation* (3rd ed.) Littleton: Publishing Sciences Group, 1977.

### 5. Editor, Compiler, Chairman as Author

Rhodes AJ, Van Rooyen CE (comps). *Textbook of virology: For students and practitioners of medicine and the other health sciences* (5th ed). Baltimore: Williams & Wilkins, 1968.

### 6. Chapter in Book

Weinstein L, Swartz MN. Pathogenic properties of invading micro-organisms. In: Sodeman WA Jr, Sodeman WA (eds). *Pathologic physiology: mechanisms of disease*. Philadelphia: WB Saunders, 1974: 457 - 72.

### 7. Agency Publication

National Care for Health Statistics. *Acute conditions: incidence and associated disability, United States, July 1968 - June 1969*. Rockville, Me: National Centre for Health Statistics,

1972. (Vital and health statistics). Series 10: data from the National Health Survey, No 69). (DHEW Publication No (HSM) 72 - 1036).

## Other Articles

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Shaffer RA. Advances in chemistry are starting to unlock mysteries of the brain: discoveries could help cure alcoholism and insomnia, explain mental illness. However, the messengers work. *Wall Street Journal* 1977; Aug 12: 1(col 1), 10 (col 1).

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# GI Cancer – The Global Burden in the New Millennium

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## Summary

Digestive cancers as a group account for the highest incidence and mortality of cancer worldwide, with 3 million new cases and 2.2 million deaths annually in the year 2000. Gastroenterological societies should influence national health policies to implement preventive strategies. I shall report on the burden of digestive tract cancers and preventive measures in the new millennium.

Oesophageal cancer has incidences as high as 195.3/100.000 in women and 165.3 in men in the Caspian region of Iran and mortality rates of 211.2 in men and 136.5 in women in Linxian county, China. The so-called Asian oesophageal cancer belt, which spans from Iran, the Central Asian Republics to East China, is the highest risk area. Cancer of the oesophagogastric junction ("Barrett cancer") has the highest increase rate of digestive cancers. Northwest France bears an aggregation of oesophageal cancer in the European Community. Screening policies should include patients with dysplasia, severe dysplasia is an indication for ablative therapy or operation. The highest incidences of distal gastric cancer (non-cardiac stomach) are observed in the Russian Federation and in Japan (Yamagata, Hiroshima), high rates have also been reported in China, South America and Eastern Europe. The incidence of gastric cancer is decreasing, crude numbers will, however, increase in the less developed countries due to increasing and aging populations. Studies performed in China seem to indicate that gastric cancer can be prevented by early eradication of *Helicobacter pylori* but only when preneoplastic lesions are not yet present.

Colorectal cancer (CRC) figures seem to stabilize in Europe and North America, but there is an increase in Japan. Figures of the SEER (Surveillance Epidemiology and End Results) registry indicate a decrease of incidence and mortality figures from CRC in the USA. The increasing application of preventive colonoscopy with removal of colonic adenomas could be responsible for this observation. A growing number of national gastroenterological societies have developed guidelines and screening strategies against CRC including stool tests or endoscopic procedures (sigmo- or colonoscopy) in the last years.

Genetic susceptibility causes a significant minority of the digestive cancers. In the case of colonic cancer the number of cancer families and inherited cancer syndromes reaches 25 – 30 % of the total number. Taking the family history could identify most of the persons involved.

Primary prevention of digestive cancers include mainly changes of lifestyle and are underestimated and underused in the daily practice of physicians. Primary prevention includes avoidance of carcinogens, infectious and toxic agents like alcohol, nicotine and aims primarily at a "healthy diet" with antioxidants like fresh fruits, vegetables, less fat and meat and daily exercise. The body mass index should be less than 26 kg/m<sup>2</sup>. The NCI of the USA formulates that in the year 2015 the population can live with rather than die of cancer. Cancer should be brought under control as a chronic manageable disease and "preemption" could replace prevention.

Digestive cancers will increase – in 2020 the expected incidence rate will be 15,000,000. Whether better treatment alone will significantly alter this development is questionable. Gastroenterologists should fight for the awareness of the cancer risks and for screening procedures where appropriate. Multidisciplinary task forces with colleagues of neighboring medical disciplines, with politicians, industry representatives and media celebrities have been useful. A joint approach is important to attack one of the most important challenges of health care of our time. The International Digestive Cancer Alliance – IDCA – can assist national partner societies with advice whenever needed.

A new theory on the development of epithelial cancers is based on the observation of JeanMarie Houghton et al (Science 2004) that Bone Marrow Derived Cells (BMDC) repopulate mucosal lesions induced by *Helicobacter pylori*. These cells may become metaplastic, dysplastic and finally cancerous. This observation could lead to entirely new treatment concepts.

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# Diagnosis and Management of Pancreatic Cancer

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### **Summary**

Detection of pancreatic cancer in patients is still associated with poor survival because pancreatic cancers usually become clinical apparent in an advanced tumor stage when therapeutic options are limited. The diagnostic challenges are early detection and staging. The critical question whether the tumor is suitable for surgical resection or not is the critical challenge for staging.

Abdominal ultrasound, optimised by application of contrast-media, is the first diagnostic step. In case of a mass in the pancreatic region the presence of liver metastases supersedes further staging imaging. Histological confirmation of malignancy is required if surgical intervention is excluded and especially if the patient is enrolled in a treatment regimen of palliation. Histology can easily be achieved by ultrasound-guided puncture either of the primary or the metastatic lesions. Endoscopic drainage of the biliary tract is indicated in case of jaundice.

If in the ultrasound examination no signs of distant tumor spread are detected, accurate tumor staging is crucial to decide whether surgical resection is possible. For tumor staging the dual-phase helical CT is the most accurate technique, especially concerning arterial involvement by the tumor. MRI and EUS are alternative imaging procedures which yield however a slightly inferior accuracy in comparison to the helical CT. Each of the techniques has been optimised throughout the past few years and further refinements do occur. As EUS is not suited for the detection of distant metastases and does not reveal significantly better information concerning local tumor extension in comparison with dual phase helical CT it can not be recommended as standard staging procedure. EUS is rather expensive not widely available and heavily depends on the investigators skills. There are studies showing that EUS is a helpful complementary technique in those cases that cannot be exactly staged by CT (or MRI). EUS is particularly suitable in answering the question of the degree of tumor infiltration into venous structures.

In doubtful cases concerning the question of respectability an operative exploration (by laparoscopy) needs to be performed.

Along these basic principles each institution should develop a diagnostic algorithm based on local facilities and experience.

Surgical treatment is treatment of choice in case of tumor respectability (RO) and should be followed by adjuvant chemotherapy. In most patients only a palliative therapy with chemotherapy and biological modifiers can be adopted. There is some promise with new molecules on the horizon. Adequate nutritional support and pancreatic enzyme supplementation remain a basic mainstay in the management of patients with pancreatic neoplasia.

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# Chemoprevention in GI Cancers with Special Reference to Colorectal Cancer

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### Summary

Chemoprevention refers to the use of a drug or defined agent, such as herbal or dietary component, for the purposes of prevention of cancer. In practice, similar principles apply to those involved in testing a drug for efficacy in clinical trials. However, several issues make testing more stringent and complex:

- 1) as chemoprevention is directed at healthy people, any side-effects might render it unsatisfactory.
- 2) Testing efficacy takes much longer as the endpoint for efficacy is either cancer or at least focal dysplastic lesions such adenomatous polyps

In the case of colorectal cancer, four types of chemopreventives deserve careful examination.

**Dietary fibre:** The chemopreventive effect of dietary fibre is strongly suggested by many epidemiologic and observational studies although interventional trials with adenomas as endpoints do not prove effectiveness. There are several reasons why this might be so and dietary fibre remains a likely preventive agent.

**Calcium:** Three RCTs in 1701 subjects taking 1.6-3g/d for prevention of adenoma recurrence indicated a relative risk (RR) for adenomas of 0.77 (0.66 to 0.91), confirming its value.

**Aspirin/NSAIDs:** Apart from epidemiological studies that suggest protection by 50%, 12 RCTs have addressed prevention of adenoma recurrence. On balance, they reduce recurrence. Unfortunately, side effects are an issue even for the COX-2 selective drugs (possible thrombotic risk). Their use would be limited to high risk groups.

**Antioxidants:** ten RCTs involving 54,305 subjects have failed to show any benefit.

More extensive studies are indicated and mechanism of effect need more consideration. At this stage, calcium and NSAIDs have the best evidence base but side-effects of the former restrict use to high risk groups.

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# NSAID-Gastropathy: Current Approaches to Treatment and Prevention

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### Summary

Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) are one of the most commonly used classes of medication worldwide, taken by more than 30 million people daily for treating pain, inflammation, and fever. Intake of NSAIDs is related to a number of adverse drug reactions, with GI intolerance and toxicity being the most prevalent and serious. NSAID therapy induces GI complications ranging from symptoms such as dyspepsia to ulcers, GI bleeding, obstruction, and perforation. These events result in a substantial amount of morbidity and mortality, despite the advent of the cyclooxygenase-2 (cox-2) selective inhibitors or coxibs. Among patients using NSAIDs, the most common complications comprise GI symptoms such as dyspepsia, in up to 60% of patients. Occurrence of dyspepsia, however, is a poor predictor for the manifestation of complications. Indeed, the majority of patients with NSAID-associated complications present without prior symptoms. This is most likely linked to differences in the processing of visceral afferents. When examined endoscopically ulcers are found in 15–30% of individuals taking NSAIDs. Clinical upper GI events are reported with an annual incidence of 3.0–4.5%, and serious complications such as major bleeding and perforation have been demonstrated in up to 1.5% of patients taking NSAIDs. Despite the focus on upper GI events, complications located in the lower GI tract have been shown to present an additional substantial disease burden. In a post hoc analysis of a recent trial, approximately 40% of all serious GI events occurred in the lower GI tract at a rate of 0.9% per year/per annum.

Strategies to prevent or at least to minimize damage induced by NSAID therapy include the avoidance of NSAIDs, lowering the dose, selecting low-risk NSAIDs, using less toxic drugs, or prevention by co-prescription of secondary medication. Proton pump inhibitors (PPIs) as secondary medication have proved to be a useful option in preventing NSAID-induced upper GI complications. Studies have shown that PPIs are highly effective in short and long-term healing, as well as the prevention of NSAID-induced GI adverse drug reactions, and also in controlling dyspeptic symptoms. Furthermore, PPIs proved to be superior to the co-prescription of other medication such as misoprostol or H<sub>2</sub>-receptor antagonists, e.g. ranitidine. More recent studies also have demonstrated that esomeprazole (at doses of 20 and 40 mg daily) effectively controls dyspeptic symptoms in patients taking cox-2 and unselective NSAIDs. In a cost benefit analysis, in average-risk patients, the NSAID(NS) + PPI strategy costs an incremental 45,350 US dollars per additional ulcer complication avoided and 309,666 US dollars per QALY gained compared with the NSAID(NS) strategy. The coxib strategy was less effective and more expensive than the NSAID(NS) + PPI strategy. Thus generic non-selective NSAIDs are most cost-effective in patients at low risk of an adverse event. The addition of a PPI to a non-selective NSAID appears to be the preferred strategy in patients taking aspirin or otherwise at high risk of a GI or cardiovascular adverse event.

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## References

1. Wargo KA, Baty SR, Knowles G. Clopidogrel versus aspirin and esomeprazole to prevent recurrent bleeding. *N Engl J Med.* 2005 Apr 21;352(16):1716-8; author reply 1716-8.
2. Hawkey C, Talley NJ, Yeomans ND, Jones R, Sung JJ, Langstrom G, Naesdal J, Scheiman JM; NASA1 SPACE1 Study Group. Improvements with esomeprazole patients with upper gastrointestinal symptoms taking non-steroidal anti-inflammatory drugs, including selective COX-2inhibitors. *Am J Gastroenterol.* 2005 May;100(5):1028-36.
3. Chan FK, Ching JY, Hung LC, Wong VW, Leung VK, Kung NN, Hui AJ, Wu JC, Leung WK, Lee VW, Lee KK, Lee YT, Lau JY, To KF, Chan HL, Chung SC, Sung JJ. Clopidogrel versus aspirin and esomeprazole to prevent recurrent ulcer bleeding. *N Engl J Med.* 2005 Jan 20;352(3):238-44.
4. Chan FK, Hung LC, Suen BY, Wong VW, Hui AJ, Wu JC, Leung WK, Lee YT, To KF, Chung SC, Sung JJ. Celecoxib versus diclofenac plus omeprazole in high-risk arthritis patients: results of a randomized double-blind trial. *Gastroenterology.* 2004 Oct;127(4):1038-43.
5. Giral A, Ozdogan O, Celikel CA, Tozun N, Ulusoy NB, Kalayci C. Effect of Helicobacter pylori eradication on anti-thrombotic dose aspirin-induced gastroduodenal mucosal injury. *J Gastroenterol Hepatol.* 2004 Jul;19(7):773-7.

# Screening and Surveillance of Colorectal Cancer – Current Practice and Guidelines

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### Summary

Screening refers to population testing of apparently healthy people. WHO has set the criteria that justify screening: a common problem, a curable stage, an acceptable test, and a health care system able to deliver treatment. Colorectal cancer fits this definition in most western and many non-western countries whose lifestyle is westernising. Authorities agree that for average risk individuals aged 50 years or over it is justifiable to undertake two-step screening where a test such as a faecal occult blood test (FOBT) is used to select for those who proceed to colonoscopy. This approach is justified by 4 RCTs. New technology faecal immunochemical test (FIT) for haemoglobin do a better job than the early FOBT and or more reliable with Asian-style diets. Some recommend one-step screening with colonoscopy itself as an option but feasibility within the health care system and acceptability to many people reduce its applicability.

Surveillance is the testing for colorectal cancer of asymptomatic people who are at increased risk. The main categories of increased risk include family history, personal past history of colorectal neoplasia and longstanding inflammatory bowel disease. Depending on the nature of past adenomas or degree of family history, colonoscopic surveillance is normally conducted at 3-5 yearly intervals. In the inherited familial syndromes – familial adenomatous polyposis and hereditary nonpolyposis colorectal cancer – more frequent surveillance is indicated and the age at which it starts relates to family circumstances.

It is vital that screening/surveillance tests are done with high quality and that screenees are fully advised of risk as well as benefit. Test sensitivity is no more important in population screening than is the willingness of people to be tested – the best test is the one that gets done (safely).

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# Management of *H. pylori* Infection: Maastricht III - 2005

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## Summary

In the light of the most recent clinical developments in the management of *H. pylori* infection, the European Helicobacter Study Group (EHSG) organized the Maastricht III Consensus Report, that involved 50 participants from 26 countries around the world. This abstract provides a brief summary of some novel and major aspects relevant for clinician routine.

In the new edition of the Maastricht guidelines three areas have been addressed:

- Indications/contraindications for *H. pylori* eradication, with special focus on dyspepsia, patients exposed to NSAIDs or Aspirin, and the relationship with GERD
- Diagnostic procedures - Standard and rescue therapy of *H. pylori* infection
- Prevention of gastric cancer and other complications related to *H. pylori*

Selected recommendations and statements are listed in the table:

Indications/contraindications for *H. pylori* eradication and relevant statements

### **Uninvestigated dyspepsia**

- *H. pylori* test and treat is an appropriate option for patients with uninvestigated dyspepsia

### **NSAIDs**

- In patients who are naïve NSAIDs users, *H. pylori* eradication may partially prevent peptic ulcers and/or bleeding
- In patients on long term NSAIDs and peptic ulcer and/or ulcer bleeding, PPI maintenance therapy is superior to *H. pylori* eradication in preventing ulcer recurrence and/or bleeding

### **Aspirin**

- Patients who are on long-term aspirin with ulcer disease and significant clinical bleeding should be tested for *H. pylori* and if positive receive eradication therapy

### **GERD**

- *H. pylori* eradication does not cause GERD.

### **Atrophic gastritis**

- *H. pylori* eradication halts the extension of atrophic gastritis and may lead to regression of atrophy. The effect on intestinal metaplasia is uncertain.

### **Iron Deficiency Anemia**

- *H. pylori* infection should be sought for and treated in patients with unexplained iron deficiency anemia

### Diagnosis of *H. pylori* infection

- The non-invasive tests that can be used for the test and treat strategy are UBT and the stool antigen tests. Certain kits for serology with high accuracy can also be applied
- PPI is a source of false negative diagnostic tests except serology, PPI should be stopped for at least 2 weeks before to perform diagnostic test.
- It is recommended to follow up patients after *H. pylori* eradication with UBT, if available. If this diagnostic procedure is not available, a laboratory-based stool test, preferably using monoclonal antibodies, could be used

### Prevention of gastric cancer

- *H. pylori* eradication prevents development of preneoplastic changes (intestinal metaplasia, atrophic gastritis) of the gastric mucosa
- Eradication of *H. pylori* has the potential to reduce the risk of gastric cancer development
- The optimal time to eradicate *H. pylori* is before preneoplastic conditions (atrophy, intestinal metaplasia) are present

### Treatment strategy

First line therapy for *H. pylori* eradication

PPI - clarithromycin - amoxicillin or metronidazole therapy remains the recommended first line therapy in populations with less than 15-20 % clarithromycin resistance prevalence in population in less than 40 % metronidazole resistance prevalence PPI - clarithromycin - metronidazole is preferable



Quadruple therapies are alternative first line therapies



In case of failure



Second line therapy

Bismuth-based quadruple therapies remain the best second line therapy, if available, if not, PPI - Amoxicillin or tetracycline and metronidazole are recommended



Subsequent failures

Rescue therapy



The rescue therapy should be based on antimicrobial susceptibility testing

# Gastro-Oesophageal Junction Cancer - The Emerging GI Cancer

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## Summary

Marked changes are occurring in the incidence and anatomical distribution of cancer of the stomach. Cancer of the mid and distal stomach is showing a marked fall in incidence and this may be explained by the falling incidence of *Helicobacter pylori* infection and associated atrophic gastritis. In contrast, the incidence of adenocarcinoma of the proximal cardia region of the stomach and gastro-oesophageal junction remains high or is increasing. The aetiology of cancer of the gastro-oesophageal junction and the reason for its increase are unclear.

There has been interest in the possible role of gastro-oesophageal reflux in the aetiology of cancer at the gastro-oesophageal junction. However, unlike patients with oesophageal adenocarcinoma there is only a very weak association between reflux symptoms and cancer of the gastro-oesophageal junction. However, it has recently been shown that short segment acid reflux is common, even in asymptomatic subjects and this might produce ultra-short segments of Barrett's oesophagus leading to cancer at the gastro-oesophageal junction and cardia.

We have recently studied the incidence of *Helicobacter pylori* infection and atrophic gastritis in patients with cancer of the gastric cardia. *H. pylori* infection was significantly less common in patients with cardia cancer than controls. However, severe atrophic gastritis was more common in the cardia cancer patients with *Helicobacter pylori* than in the control patients with *Helicobacter pylori*. These results suggest that *H. pylori* infection may have a dual effect in the aetiology of cardia cancer by having an overall protective effect but predisposing to the cancer when it produces severe atrophic gastritis.

The gastro-oesophageal junction and cardia region of the stomach has a unique luminal environment which may predispose to mucosal damage and carcinogenesis. Following a meal, this part of the stomach remains highly acidic by escaping the buffering effect of food. In addition, the cardia region has active luminal nitrite chemistry arising from the interaction between nitrite-laden saliva and acidic gastric juice. This chemistry can result in the production of high concentrated nitric oxide and nitrosating species which may predispose to local carcinogenesis.

In summary, current evidence suggests that cancer of the cardia region of the stomach and gastro-oesophageal junction is likely to be heterogeneous. Various factors may contribute including short-segment acid reflux, active luminal nitrite chemistry and *Helicobacter pylori* infection which may exert an overall protective effect but a predisposing effect when it induces severe atrophic changes.

# New Insights into How *H. pylori* Infection Causes Gastric Cancer?

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## Summary

*Helicobacter pylori* infection is an important risk factor for cancer of the non-cardia region of the stomach. Between 1% and 3% of patients with *H. pylori* infection will develop this cancer by 80 years of age. The mechanism by which *H. pylori* infection leads to the development of non-gastric cardia cancer has become clearer over the past few years.

In most patients who progress to non-cardia gastric cancer, the infection induces atrophic pangastritis and hypochlorhydria. There has been interest in the reasons why a subgroup of *H. pylori* infected subjects develop this pattern of gastritis associated with a high risk of cancer. The strain of *H. pylori* infection may be important with atrophic gastritis positively associated with CagA positive strains and negatively associated with strains with the dupA gene. Host genetic factors are also important. For example, subjects with pro-inflammatory polymorphism of the interleukin-1 $\beta$  gene have a markedly increased risk of developing hypochlorhydria and atrophic gastritis in response to the infection and also of going on to develop gastric cancer. Environmental factors such as dietary anti-oxidant intake may also influence the risk of progressing to atrophic gastritis.

Another question which needs to be addressed is why patients with *H. pylori* induced atrophic pangastritis and hypochlorhydria progress to develop dysplasia and gastric cancer. This is likely to be related to consequences of both the histological pattern of gastritis and the associated hypochlorhydria. In hypochlorhydria, the gastric lumen may be colonised by a variety of bacterial species including nitrosating species able to form potentially carcinogenic nitrosocompounds from dietary nitrate. The inflammatory infiltrate within the gastric mucosa is also likely to predispose to DNA damage through the production of free radicals and accelerated cellular proliferation.

There are several other well-established risk factors for gastric cancer which must also be considered. These include a diet deficient in anti-oxidants and containing excess salt, smoking and male gender. The anti-oxidants are likely to increase the risk of DNA damage by reactive oxygen species and also increase the risk of the formation of N-nitrosocompounds within the lumen. A high salt intake may facilitate the development of a pangastritis and also increase the permeability of the mucosa to luminal carcinogens. Smoking is likely to aggravate the oxidative and nitrosative stress. The mechanism by which males have a marked increased risk of gastric cancer remains unknown but is clearly very important. It appears that females are protected from gastric cancer during their reproductive years, an effect which could be mediated by some hormones or iron status.

It can therefore be seen that the development of gastric cancer in *H. pylori* infected subjects is a very complex and multi-stage process. However, in most cases, *H. pylori* is probably an essential co-factor and eradicating the infection should reduce the incidence of the cancer. However, the infection will need to be treated at an early age before the process becomes irreversible. Prevention of infection would be best.

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# The Role of Endoscopy in the Management of GI Cancer

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## Summary

Endoscopic inspection and multiple target biopsies for careful histological examinations are in 2005 the basis of cancer detection in the digestive tract. However, advances in imaging have significantly improved our ability to identify preneoplastic and minute cancer lesions. Endoscopy gains a new quality as the important tool in cancer prevention. Bioendoscopy is a new challenge and deserves further careful evaluation.

Squamous cell carcinoma and adenocarcinoma of the esophagus are much easier detected by magnification endoscopy. Barrett's esophagus has a distinct ridge pattern, sometimes with tortuous shape and wide grooves. Red and flat discoloration with hypervascularisation may correspond with high grade dysplasia. Narrow band imaging (NBI) combined with magnifying endoscopy displays changes of the microvasulature like dilation, caliber changes and weaving of the mucosal vessels. Optical coherence tomography (OCT) provides an image in real time with a resolution approaching that found in conventional histology ("optical biopsy"). It has been found to be useful in the detection of cancer in Barrett's esophagus. The data for the use of OCT to detect dysplasia are rather limited. Chromoendoscopy with lugol solution enhances the detection of suspected squamous cell carcinoma in high-risk populations in China, Japan and Brazil. Methylen blue has been reported to improve the detection of dysplasia and cancer in Barrett's esophagus. Magnifying chromoendoscopy with an endocytoscopy system ("mother-and-baby-scope system") makes magnifications up to 1125 x possible. Histological images of superficial SCC have been published: Cellular density was increased, cancer cells and nuclei displayed a marked heterogeneity.

Wheter Methylen blue improves the detection of dysplastic and neoplastic areas in Barrett's esophagus is not generally accepted by the scientific community. The same is true for the light-induced-fluorescence-emission (LIFE GI system). Fluorescence endoscopic imaging by ALA-induced fluorescence spectroscopy has been used to detect dysplasia and for targeted therapy of esophageal cancer.

Collection of cellular material from suspicious area of the esophagus have been successfully examined with the fluorescence in situ hybridisation (FISH) technique and with immune fluorescence studies on ploidy, which both provided promising results on sensitivity and specificity in detecting high-grade dysplasia and adenocarcinoma of the esophagus. These methods are underestimated and would deserve more attention and application.

Endoscopic ultrasound (EUS) is unbeaten as tool for T-staging, EUS guided biopsies reach nodes close to the esophageal wall. Endoscopic resection is now widely applied and has a lower morbidity and mortality than the surgical alternative. The ablation technique with Argon Plasma coagulation is easy but

a caveat is indicated. Barrett mucosal particles could be "buried" under the surface of the replacing squamous epithelium and become malignant lateron. Photodynamic therapy is used in a few centers for cases with multifocal dysplasia or cancer in long Barrett segments and is still experimental. Nd Yag laser may be applied for palliation of narrow tumorous strictures and to enhance the introduction of endoprosthesis.

**Distal stomach cancer** is endemic in larger areas of the world. Screening with endoscopy together with preventive life style alterations have led to a decrease in incidence and mortality of gastric cancer in Japan.

In low risk areas screening endoscopy is feasible only in high-risk persons with "hereditary" risks (hereditary syndromes and increased family risks). Optical biopsy techniques for the early diagnosis could gain importance because superficial gastric cancers are amenable to endoscopic resection because their fluorescence is stronger or weaker depending on the stroma of the tumor and the surrounding tissue. The fluorescence spectrum induced by a xenon lamp permits a differentiation of cancer from its neighbourhood with sensibility and specificity well beyond 80 %.

The combination of chromoendoscopy and magnification enhances the identification of lesions amenable for a resection. Criteria of "typical" patterns predictive of metaplasia and dysplasia include color, pit appearance and the presence of villi. Confirmation of these data would be desired. Multidetector and helical CT is superior for distant metastasis, but EUS has a higher accuracy for local staging and analysis of normal size lymphnodes.

In **colorectal cancer** white light colonoscopy with biopsy have the highest sensitivity and specificity in the diagnosis of cancer and its precursor, the adenoma. However, small and depressed lesions can be overlooked and the miss rate varies between 3 and 9 %. Challenges also arise in the identification of dysplasia in flat and polypoid lesions particularly in cases with chronic ulcerative colitis. Chromoendoscopy and magnification endoscopy increase the detection of flat adenomas and cancers, ensure the completeness of tissue resection. Whether these new tools or confocal microscopic imaging are superior for the identification of dysplasia in ulcerative colitis has to yet to be shown. Fluorescence endoscopy has a sensitivity of 87 % for the detection of dysplasia after local administration of 5-ALA by enema or spray catheter as compared with 43 % by systemic iv administration. The surprisingly real-time confocal microscopic images display surface and subsurface histology. Its potential for "endoscopic histology" of many lesions seems rather unlimited.

## Conclusion

The 20th century was regarded as the century of endoscopy because diagnostic, therapeutic and preventive endoscopy were not only founded but reached the pole position in medical imaging. The future of endoscopy appears to be bright and the summit has yet to be reached.

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# PET Imaging in GI Cancers

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## A Goh

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## Summary

### Introduction

Positron Emission Tomography (PET) technology has existed for nearly four decades, but gained recognition as a clinical imaging modality only in the last 5-10 years. Like all nuclear imaging techniques, PET is based on the "tracer principle", in which a small amount a radio-labelled molecule is introduced into the body. A PET scanner then detects the radioactivity to produce diagnostic images of the biological process that affects the kinetics of the molecule. In many diseases, these molecular changes occur well before anatomical changes are apparent on CT or MRI.

The diagnostic power of PET is dependent on the radiotracers, which are biologically important molecules or their analogs. In biomedical research, hundreds of PET tracer compounds have been synthesized for experimental work in neuroscience, oncology, drug development, and other research. In routine clinical imaging however, the most widely used tracer is Fluorine-18 labelled deoxyglucose (FDG), an analog of glucose. Active cancer cells show increase in glucose utilisation, distinguishing them from normal tissues on FDG-PET imaging.

The functional information from PET can be further enhanced by aligning the PET images with CT or MRI, which provide an anatomic backdrop to accurately pinpoint the sites of abnormal tracer uptake. This "image fusion" can be achieved using computer software, or with imaging hardware such as the current breed of dual-modality PET/CT scanners.

### Role of PET in common GI cancers

Oesophageal cancer, like many epithelial cancers, displays high glucose metabolism. Earlier studies showed 95-100% sensitivity of FDG-PET for demonstrating the primary tumour, and recommended PET for diagnosis, initial staging and restaging. More recent reports show further improved accuracy of combined PET/CT imaging in distinguishing recurrent disease from post-therapy changes, delineating the location of metastases, and monitoring therapy response.

In gastric cancer however, preliminary observations indicate relatively low FDG accumulation in the non-intestinal (diffuse) growth type, i.e. advanced gastric tumours with poor prognosis may show low FDG uptake. The intensity of FDG uptake is not predictive of prognosis and survival. However, the intestinal type (more common in Asians) is more often FDG-avid.

PET has a unique role in gastro-intestinal stromal tumours (GIST). Glivec has proved to the first

effective systemic treatment for GIST. FDG-PET is able to demonstrate early response to Glivec therapy, based on conversion from PET-positive to PET-negative tumour uptake, long before any visible change in tumour volume. This has been shown to an early predictor of response to therapy, thus excluding non-responders from futile expensive medication.

Staging and restaging of colorectal cancer is one of the well accepted clinical applications of PET. Although reimbursement is approved for PET in initial pre-op staging, many surgeons do not routinely recommend staging PET because most patients will benefit from colectomy to prevent intestinal obstruction, and about 70% of patients will be surgically managed with curative intent. However, disease recurrence occurs in about 40% of patients, and a re-intervention can potentially cure recurrent colorectal Ca, provided disease is limited, based on PET restaging. The liver is a common site of tumour spread or recurrence. PET has high sensitivity for liver metastases and is useful in selecting patients for hepatic resection. A more recent publication reported that in colorectal cancer, hybrid PET/CT scanning increases accuracy and certainty of locating lesions and reduced equivocal results by 50%, compared to PET alone. Overall correct staging increased from 78 to 89%.

In hepatocellular carcinoma FDG PET has poor sensitivity of about 55% compared to CT (90%). The less differentiated tumours tend to accumulate FDG, whereas the well differentiated and low tumour grades have a lower FDG activity or no uptake at all. However, dual-tracer imaging using F-18 FDG and C-11-acetate showed a 100% detection rate (Ho C L et al). Unfortunately, C-11 acetate is not a widely available PET radiotracer. Cholangiocarcinoma is known to be strongly FDG-avid.

In pancreatic cancer, current data appears to support the use of FDG PET to differentiate pancreatic cancer (high FDG uptake) from chronic pancreatitis (usually low uptake). However, false positives may be seen in superimposed acute pancreatitis. PET detected pancreatic malignancy with sensitivity of 88% specificity of 83%. For detection of liver metastases from pancreatic cancer, PET showed 97% sensitivity for lesions >1 cm size, but fell to only 43% for sub-centimetre lesions.

### **Future directions - Beyond FDG**

Whilst FDG is the main radiotracer behind the recent growth clinical PET, a host of other useful PET tracers have been synthesized. These tracers exploit the different molecular changes that distinguish disease from normal tissues, such as increased rates of DNA synthesis, cell proliferation, protein synthesis, hypoxia, changes in receptor expression, or activity of transport mechanisms.



# Virtual Colonoscopy: CT and MR Colonoscopy - How Good is it?

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## Summary

Since its introduction in 1994 Virtual Colonoscopy (CT/MR Colonography) has continued to improve considerably. This is as a result of vastly superior and faster multidetector computed tomography scanners and quicker MR scanners. Improvements in software and hardware of computers allow the dynamic and interactive real time viewing of the colon in 2 and 3 dimensional images.

Virtual colonoscopy is currently under investigation as a potential screening test for colonic polyps and cancer.

Many studies have been carried out to assess the ability of CT and MR colonography to detect polyps. The results of these studies have varied from 48% of small polyps (<6mm diameter) to 90% or more of all polyps especially with newer multidetector CT scanners and the use of 3D imaging. There is already a role for virtual colonography in patients with failed colonoscopy.

The future of virtual colonoscopy is very promising. For this procedure to be better accepted it is important for the radiologist who interprets the examination to be better trained in performing virtual colonoscopy especially the interpretation.

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# Helical/Multiplanar CT Scans

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## Summary

For more than three decades, CT has been an important diagnostic imaging tool. In particular, technologic advances in the last 5 years have influenced the patterns of use of CT with the use of CT increasing at a steep rate. The principal technical advancement responsible for this increase has been the use of multidetector CT (MDCT), offering both faster scanning and the potential for higher image quality. The value of MDCT resides in its striking improvement of both spatial and temporal resolution, due to the thinner slice thickness and faster scan time. For example, it takes more than 30 seconds to scan a 30 cm length of the abdomen with a single-slice helical CT collimation of 5 mm and pitch of 1.5. It only takes 10 seconds with a four-slice MDCT single-slice collimation of 2.5 mm, and eight seconds with a 16-slice, 0.75 mm single-slice collimation. MDCT provides high-resolution images of the entire abdomen within short breath-hold duration. Because the slices are thinner, the z-axis resolution is improved, which enables reconstruction of high-quality 3D or multiplanar reformation images. The role of MDCT in the assessment of liver, pancreatic and other GIT cancers will be presented.

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# Overview of Management of Colorectal Cancer

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## G Young

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### Summary

Proper management starts with timely detection. As screening becomes more common, many are being detected in presymptomatic stages. Certainly suggestive symptoms such as recent onset rectal bleeding, or iron deficiency, in people over 40 years warrants appropriate diagnostic colonic examination, ideally colonoscopy.

Once histological diagnosis has been made, the majority of patients proceed promptly to surgery after having had a staging CT scan, having been checked for anaemia and comorbidities and having had a baseline CEA (to aid monitoring recurrence). Even with distant metastases, resection is usually warranted for palliative reasons. Studies now show that trained colorectal surgeons achieve the best results. This is especially so for low rectal cancers where radiation therapy is usually also indicated. Many cases do not now need an 'ostomy'. It is vital that the surgeon and pathologist together stage the lesion accurately as this determines whether chemotherapy is indicated.

Respective 5-year survival rates (usually a cure) for Dukes' stages are: A – 95%, B-80%, C-35%, D – 5%. Stage C warrants chemotherapy. High quality palliative care with pain relief are warranted for stage D – chemotherapy may also provide effective palliation. Solitary liver metastases might be cured by resection.

After surgery several steps are worthwhile. A check colonoscopy may be warranted if it was an obstructive lesion because more proximal adenomas needing removal are easily missed at surgery. A healthy dietary lifestyle should be advised. Colonoscopic surveillance at 3-yearly intervals for future adenomas or new cancer is important. It is also important in any case to check family history and genetic testing of the tumour might be indicated. It is prudent to advise family members through the case of their increased risk.

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# Newer Chemotherapeutic Agents in Colorectal Cancer

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## **R Chan**

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### **Summary**

Colorectal cancer (CRC) is a leading cause of cancer death and modulated fluorouracil (5FU) has been the backbone of chemotherapy in CRC. The pivotal role of 5FU has recently been challenged when combinations of 5FU-irinotecan and 5FU-oxaliplatin entered the clinic. Median survival in patients with advanced CRC reaches 16-17 months when these couplets are used; and approaches 20-22 months when all three agents have been used at some stage during the treatment.

In the adjuvant setting, improvement in disease-free survival associated with oxaliplatin-5FU has been reported (MOSAIC and NSABP C-07). Data on overall survival, however, are not mature. Irinotecan-5FU is also examined in a number of randomized studies in the adjuvant setting (CALGB 89803, PETACC-3, FNCLCC ACCORD 2) and to date, these trials fail to show convincing benefits over modulated 5FU and use of this couplet should at present be restricted to trials. Nevertheless, taken together, the era of single agent 5FU is now closing and combination chemotherapy is fast becoming a reality in the adjuvant treatment of CRC.

Oral agents (capecitabine and UFT) with advantages in terms of ease of administration, quality of life and superior toxicity profile have shown equivalence in outcomes in advanced and adjuvant settings when compared to modulated 5FU. These agents are now combined with oxaliplatin or irinotecan in many active trials in advanced and early CRC.

Targeted therapy, represented by cetuximab and bevacizumab, show significant activities and numerous groups have reported their preliminary results whilst more trials are being planned to further define the role of these agents.

Although these latest advances are exciting, tailored therapy remains a challenge. Headways are made in identifying potential predictive (efficacy and toxicity) and prognostic factors; and various molecular and genomic markers are being examined and their roles in CRC will be further refined in the near future.

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# Performance of [<sup>13</sup>C]-Urea Breath Test in Determination of *Helicobacter pylori* Infection Status

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## Summary

### Background

Urea Breath Test (UBT) has been recommended as a rapid, non-invasive method to determine the *Helicobacter pylori* infection status of dyspeptic patients. In this study UBT were carried out on patients before endoscopy and the results were compared to biopsies' sub-cultures of *H. pylori* as a gold standard.

### Materials and Methods

Three hundred ninety seven (397) patients included in this study were those attending the Endoscopic Unit of Hospital UKM due to various gastroduodenal conditions. Informed consent was obtained from each patient before UBT using [<sup>13</sup>C]-UREA (Cambridge Isotope Laboratories, Inc) and endoscopy were performed. Results of UBT were analysed on site. Two biopsies (one antrum and one corpus) obtained from each patient were placed in transport media and sent to the microbiology laboratory for subcultures of *H. pylori*. The biopsies were placed onto selective media and incubated at 37° C in a microaerophilic condition for 5 days. *H. pylori* were identified on the basis of their colony morphology, Gram staining and urease test.

### Results

Out of the 397 patients (NUD and PUD) tested for UBT, 99 (24.9%) were positive whilst the remainder 298 patients (75.1%) were negative. Biopsies, either corpus and antrum or corpus/antrum only, obtained from all 99 (100%) of the UBT positive patients revealed *H. pylori* on subcultures. However, biopsies obtained from 8 UBT negative patients revealed *H. pylori* on subcultures. Hence, sensitivity of UBT is 92.5%, specificity is 100.0% and the negative predictive value (NPV) is 97.3%.

### Conclusion

The sensitivity of UBT carried out in this study is 92.5% and thus can be used as an indicator for the early detection of *H. pylori* infection. However, other tests such as culture, histopathological examinations of biopsies and/or urease test need to be included in the diagnosis of *H. pylori* infection.

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# ***CagA* Sequence Analysis and Identification of *CagA* Tyrosine Phosphorylation Motifs in Malaysia *Helicobacter pylori* Isolates**

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## **Summary**

### **Background**

The *cagA* 3' region is geographically diversified. Based on the strains' origin, two types of CagA protein have been identified, namely Western CagA and East Asian CagA. It has been suggested that the number of tyrosine phosphorylation sites (EPIYA sequence) within the *cagA* 3' region is correlate with CagA phosphorylation which brought about changes in the gastric epithelial cells.

### **Aim**

To examine the variation in the type and number of CagA phosphorylation sites in Malaysian *H. pylori* strains and their association with clinical outcome and patients' ethnicity.

### **Materials and Methods**

DNA of 25 strains were randomly selected from the DNA collection of Malaysian *H. pylori* isolates. *cagA* 3' region was amplified by PCR and cloned using pCR2.1 vector. The recombinant plasmids were sequenced at both strands and sequence analysis was performed using the BioEdit programme.

### **Results**

Three types of *cagA* variants identified based on the differences of PCR product size were Type A (621-651 bp), Type B (732-735 bp) and Type C (525 bp). Among the variants, numbers of EPIYA sequence detected were three in *cagA* type A, four in *cagA* type B and two in *cagA* type C. CagA type A can be further subdivided into *CagA* subtype A1 (12 strains) and *CagA* subtype A2 (8 strains) where CagA subtype A1 is similar to the CagA isolates from East Asia such as Japan and China, whereas CagA subtype A2 contains sequence similar to the Western isolates. Analysis of the *cagA* variants of the 25 strains are as shown in Table I.

**Table I. Distribution of *cagA* variants among 25 *H. pylori* strains according to the disease group and patients' ethnicity.**

	<b><i>cagA</i> type A</b>		<b><i>cagA</i> type B</b>	<b><i>cagA</i> type C</b>
	<b>Subtype A1</b>	<b>Subtype A2</b>		
<b>Ethnic group:</b>				
Malay	2	1	1	1
Chinese	10	3	0	0
Indian	0	4	3	0
<b>Disease group:</b>				
Gastritis	2	3	3	1
Peptic ulcer disease	8	3	0	0
Intestinal metaplasia	2	2	1	0

## Conclusion

It is observed that Malaysian strains of *H. pylori* contain two types of CagA protein, that is Western and East Asian CagA. It appears that the variation of the *cagA* 3' region might contribute to the modification of virulency in different hosts. The presence of the different CagA type and disease associations need to be investigated further with larger number of strains in order to elucidate the pathogenic role of CagA protein in the pathogenesis of *H. pylori* infection in our Malaysian population

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# Helicobacter pylori Resistance Pattern to Antimicrobials at Kuala Lumpur Hospital

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## Summary

### Introduction

The incidence of antimicrobial resistance to *Helicobacter pylori* appears to vary with geographical location. The resistance rates to various antibiotics has been well studied in the west but this is somewhat lacking in our part of the world. Culturing *Helicobacter pylori* is somewhat challenging and arduous as the organism is very fastidious. We embarked on this study to define the antibiotic sensitivity pattern to *Helicobacter pylori* in our center.

### Materials and Methods

This study was conducted from June 2000 to October 2004. *Helicobacter pylori* culture and sensitivity pattern was performed for patients who either had endoscopic patterns strongly suggestive of *Helicobacter pylori* or a rapidly positive Rapid Urease Test (RUT) noted during the procedure or both. Four biopsies from the gastric mucosa using standard biopsy forceps, two from the antrum and two from the corpus, were taken during endoscopy and placed in a small screw-capped bottle containing 0.85% NaCl solution to maintain humidity.

### Results

From a total of 317 patients who had *Helicobacter Pylori* culture and sensitivity tested, 214 were positive for RUT. We were fortunate to have 49 patients with a positive culture by disc diffusion method from this population and giving a culture rate of 22.9% among the RUT positive patients. The study population consisted of 25 (51%) females and 24 (49%) males with mean age of  $58.8 \pm 12.8$  (range: 17-82) years with 14 patients (28.6%) < 55 years of age, with 25 Indians (51%), 22 Chinese (45%) and 2 Malays (4%). A total of 15 patients exhibited resistance to Metronidazole, Clarithromycin, Azithromycin, Amoxicillin or the combination of these antibiotics, giving a resistance rate of 28.6%. Resistance to Metronidazole was 24% (12 of 49), Clarithromycin 14% (7 of 49), Azithromycin 18% (9 of 49) and Amoxicillin 2% (1 of 49). Five patients had resistance to only one antibiotic (all to Metronidazole). Six patients had resistance to two antibiotics (Three to both Clarythromycin and Azithromycin and another three to Metronidazole and Azithromycin) while another 4 patients had resistance to three antibiotics (three to Metronidazole, Clarythromycin and Azithromycin; One to Amoxicillin, Metronidazole and Clarythromycin). Interestingly four patients had resistance to both Metronidazole and Clarythromycin and one patient had resistance to Amoxicillin, Clarithromycin and Metronidazole. No isolates was

resistant to Augmentin or Tetracycline. The patients who exhibited resistance to antibiotics were much older with mean of  $61 \pm 7$  (range 45- 69) years with 13 out of 15 patients who exhibited resistance were older than 55 years (86.7%). There was no gender preponderance noted. Being the single largest racial group (60% patients attending endoscopy), the Malays had low RUT positivity and culture rate and did not exhibit any resistance. The Indian subgroup, despite comprising 10% of patients attending endoscopy, had a high RUT positivity and *Helicobacter pylori* culture rate.

## Conclusion

In this series the resistance to Metronidazole was 24%, to Clarythromycin was 14% and to Amoxycillin was 2%. There was no gender predisposition to resistance pattern. However there was a trend towards the older age group (i.e > 55 years of age, p=NS). The Indians followed by the Chinese had a better *Helicobacter pylori* culture rate and this perhaps suggest the possibility of *Helicobacter pylori* existing in a higher density in these subgroups. The Indians seem to have a higher resistance rate among the three races. We report existence of multi-resistant *Helicobacter pylori* in at a phenomenal rate of 20.4% among all the *Helicobacter pylori* that was cultured and 66.7% among our patients that exhibit resistance. Resistance to both Metronidazole and Clarythromycin occurred in 4 patients (8.2%). No resistance was demonstrated to Augmentin and tetracycline demonstrating its possible role in future eradication regimes.

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# Detection of CagE GENE in *Helicobacter pylori* Isolates Among Three Major Ethnic Groups in Malaysian Population

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## Summary

### Background

*Helicobacter pylori* is the cause of chronic gastritis and is involved in the pathogenesis of peptic ulceration and gastric adenocarcinoma. Cag Pathogenicity Island (PAI) in *H. pylori* genome is reported to be a major virulence factor where cagE is located.

### Objective

To determine the presence of cagE gene in *H. pylori* isolates and to assess the association cagE gene with clinical outcome.

### Materials and Methods

Samples of gastric biopsies (antrum and corpus) were obtained from patients attending the Endoscopy Unit in Hospital Universiti Kebangsaan Malaysia (HUKM). Biopsies were subcultured for isolation of *H. pylori*. PCR technique was used to determine the presence of cagE gene in 103 isolates of *H. pylori*.

### Results

Out of 103 *H. pylori* strains isolated from 64 patients, 84 strains (55 patients) were cagE positive. Of these, 45 (53.6%) were from antrum region and 39 (46.4%) from corpus region.

#### cagE strains of *H. pylori* vs . sites and ethnicity

Ethnicity/ Site	cagE positive				cagE negative
	Antrum + Corpus	Antrum	Corpus	Single growth (antrum/ corpus)	
Malay	2	0	0	3	1
Chinese	18	4	1	15	1
Indians	9	0	0	3	7
Total	29	4	1	21	9

cagE-positive strains were isolated from 77% patients with peptic ulcer disease (PUD) and 88% were non-ulcer disease (NUD).

### Conclusion

There is a distinctive difference in the cagE-positive strains of *H. pylori* isolated from the three ethnic groups in Malaysia.

# Audit of *H. pylori* Diagnosis and Treatment in a State Gastroenterological Centre

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## Summary

### Background and Aims

This is an audit aims to assess *Helicobacter pylori* (HP) treatment outcome, test reliability, and shortcomings of current HP management in department of medicine of HSA, JB.

### Materials and Methods

This audit was performed from 16 February 2004 to 15th April 2005. Total 148 patients with positive urease test after upper endoscopy (OGD) were recruited to receive standard regime of proton pump inhibitor, amoxicillin and clarithromycin for 7 days but accepted other combinations. Pre-scope interview and urease test will be done in second OGD. Gastric biopsy for histology (HPE) and HP culture were done if suspected treatment failure; and for every 20th selected patient. Follow up management for failure cases.

### Results

Total 109 patients were analysed as 29 patients defaulted. First HPE had 31% negative for HP despite positive urease test. At second OGD, 17 cases had three diagnostic tests done with four had positive culture results. Based on HP culture, sensitivity and specificity of urease test were 100% & 85%, whereas of HPE were 50% and 100%. Majority or 105 patients (96%) were prescribed standard regime. Eradication of HP was achieved in 90% of patients. Management of the 10 failure cases included 4 were retreated with standard regime for 10 days; 3 were given empirical 2nd line regime and 2 were retreated according to sensitivity of culture and 1 defaulted. Poor compliance caused 50% of eradication failure and one patient had proven clarithromycin resistant.

### Conclusions

This study showed Urease test had sensitivity of 100% and specificity of 85% compared to HPE had sensitivity of 50% and specificity of 100% for HP detection. Regime containing clarithromycin and amoxicillin achieved 90% eradication rate and poor compliance caused 50% of eradication failure. We suggest future re-treatment either with 10 days course of standard regime for poor compliance cases or re-culture before therapy in suspected resistant cases.

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# Sequence Analysis of frxA Gene in Metronidazole Resistant *Helicobacter pylori* Strains in Malaysia

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## Summary

*Helicobacter pylori* is recognized as the major cause of peptic ulcer disease. Metronidazole is a common antibiotic used to treat of this infection. However, resistance to metronidazole is reported to be increasing in many countries. In Malaysia, studies on the mechanism of resistance to metronidazole in local strains of *H. pylori* are still lacking. Mutations in the NAD(P)H flavin oxidoreductase gene (*frxA*) are generally thought to contribute to the development of metronidazole resistance in *Helicobacter pylori*. The aim of this study was to determine the types of mutations in *frxA* gene in *H. pylori* strains that are resistant to metronidazole. The *frxA* genes were amplified using polymerase chain reaction technique using the specific primers which amplified 833 bp of PCR product. The *frxA* genes in 5 *H. pylori* strains were sequenced and analysed. Of these strains, 4 have high-level of metronidazole resistance (MICs, > 256 µl/mg) which were caused by nonsense-mutation (2 strains), point mutation (1 strain) and missense mutation (1 strain). A strain with intermediate resistant to metronidazole (MICs: 32 µg/ml) was caused by nonsense mutation. These results showed that there are many types of mutations occurring in metronidazole resistant *H. pylori* strains. Mutation in *frxA* gene is related to metronidazole resistance, however, the level of resistance is not related to the type of mutation detected.

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# Validation of Urea Breath Test in a Teaching Hospital

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## Summary

### Objective

Urea breath test is sensitive and specific in detection of *Helicobacter pylori* infection. However this was not validated in our hospital. Therefore, the aim of the study was to validate the sensitivity and specificity of urea breath test in a teaching hospital in Malaysia.

### Materials and Methods

This is a retrospective study performed between January 2004 and April 2005. All consecutive patients who presented to our unit with both endoscopy biopsies from antrum and/or corpus and urea breath test (UBT) performed will be included. Those with urea breath test without endoscopy biopsy will be excluded. The presence of *Helicobacter pylori* was detected using H&E stain on biopsy sample. Urea breath test was performed using <sup>13</sup>C IRIS. WATV Germany 2000 machine. The UBT result was then correlated with histology findings.

### Results

Urea breath test was performed on 620 patients in whom 376 patients were included. There were 185 (49.2%) Chinese, 129 (34.3%) Malays, 58 (15.4%) Indians and 4 (1.1%) Sikh patients. The median age was 56.0 (15-89) years. *Helicobacter pylori* was presence in 89 (23.7%) on histology and 101 (26.9%) patients using UBT. Thus the sensitivity and specificity of the urea breath test were 91.0% and 93.0% respectively.

### Conclusion

Urea breath test is sensitive and specific in detection of *Helicobacter pylori*

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# Effect of Helicobacter pylori Eradication on the Development of Gastroesophageal Reflux Disease Symptoms

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## Summary

### Objective

Gastroesophageal reflux disease is a common and costly disease and has a significant impact on the quality of life. The role of Helicobacter pylori infection in the pathogenesis of gastroesophageal reflux disease is controversial. The aim of this study was to determine whether eradication of Helicobacter pylori would lead to the development of gastroesophageal reflux disease symptoms.

### Materials and Methods

A prospective observational study was conducted between November 2004 and March 2005 in Hospital Universiti Kebangsaan Malaysia. All patients who presented with dyspepsia without reflux symptoms and anemia with normal upper endoscopy and positive urea breath tests (UBT) were included. Those with endoscopic diagnosis of gastroesophageal reflux disease will be excluded. Patients will be given one week of Helicobacter pylori eradication therapy after endoscopy. Reflux symptoms were assessed using validated GERD scoring system before endoscopic examination, one month and three months after eradication therapy using a validated reflux score.

### Result

Out of 39 patients with positive UBT, 25 were included. Median age is 61 (18-79) years. Majority was Chinese (60%). Helicobacter pylori eradication therapy was successful in all patients after first line or rescue therapy. There was no significant difference in the reflux scores at 1 month and 3 months compared to the baseline.

### Conclusion

Eradication of Helicobacter pylori in asymptomatic patients may not lead to the development GERD. However the sample size was small and the follow up was too short for this study.

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# DNA Fingerprinting of Metronidazole Resistant *Helicobacter pylori* by PCR-RFLP of Urea C Gene

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## Summary

*Helicobacter pylori* infection is a major cause of ulcer and peptic diseases. Treatment of *H. pylori* involves cocktail of antibiotics. However through many years, *H. pylori* develop resistance to antibiotics especially metronidazole. This study was aimed to determine the DNA fingerprints of 7 strains that are resistant to metronidazole (MIC value > 256 µg/ml) using RFLP technique. ureaC gene in these strains were amplified by PCR. The PCR product was then purified prior to digestion with Hha1 restriction enzyme. Three RFLP types were obtained, with Type 1 seen in most of the strains tested (3 out of 7), Type 2 in 2 strains and Type 3 in 2 strains. Same RFLP type was noted from strains isolated from antrum and corpus of the same patient. This preliminary study showed that there are variants of ureaC gene among local isolates of *H. pylori* and PCR-RFLP is a useful technique to differentiate between strains

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# Helicobacter pylori Eradication is Beneficial in the Treatment of Non Ulcer Dyspepsia: A State Hospital Experience

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## Summary

### Introduction

This is a follow up study of NUD management aim to assess whether the *Helicobacter pylori* (HP) eradication leads to relief of symptoms in HSA, JB.

### Materials and Methods

Fifty HP positive patients with established diagnosis of NUD were recruited to receive eradication therapy with proton pump inhibitor, clarithromycin and amoxicillin for 7 days, from 16 February 2004 to 15th April 2005. Severity of dyspeptic symptoms was assessed twice by attending gastroenterologist at diagnosis and eradication confirmation of HP by patient interviews.

### Results

Total 28 patients completed the assessment with defaulter rate of 24% age range was 16 – 74 years. Female to male ratio was 1.8: 1. Ethnic breakdown was 36% Chinese, 36% Malays and 28% Indian. Mean timing of second assessment after the first was 12.5 weeks (range 10-25 weeks). HP eradication rate was 93% as failed in 2 patients due to poor compliance. Total 46% of this cohort reported decreased of dyspeptic symptoms at least by 50%.

### Conclusion

This HSA experience suggests that eradication of *H. pylori* infection caused significant relief of dyspeptic symptoms in NUD patients.

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# Negative-Used CLOTest is Reusable within About One Month Time

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## Summary

### Introduction

A study was carried out at Hospital Mentakab to assess whether negative-used CLOtest is reusable within 5 week duration between 7th of March 2003 to 30th of May 2003. A total of 52 patients were recruited and gastroscopy was done. New and negative-used CLOtests were simultaneously performed in every patient. The negative-used CLOtest is reused within 29 to 35 days after first usage. During this time, the negative-used CLOtest was stored in the endoscopic room within temperature of 20 – 24°C

The results of negative-used CLOtest are similar to the new CLOtest with 100% accuracy. Twelve patients were tested positive and 40 were negative.

Other study has showed that negative-used CLOtest is reusable within one to three days<sup>1</sup>. This study shows that the negative-used CLOtest can be recycle for a longer duration.

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## References

1. MS Sarif, H Ghazali, J Din, H Singh. Is negative used CLOtest reusable? The Medical Journal of Malaysia 2001; 56(supp A): 67.

# Evaluation of a New Immunoblot Assay for the Diagnosis of *Helicobacter pylori* in a Multiethnic Population

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## Summary

### Introduction

To evaluate a recombinant antigen-based immunoblot assay against histology and the rapid urease test for the diagnosis of *Helicobacter pylori* infection in a multi-ethnic population.

### Materials and Methods

The study group consisted of dyspeptic patients referred for endoscopy in Hospital Ipoh. Patients were considered positive or negative for *H. pylori* infection based on the histology and rapid urease test. In these patients, serology was carried out using a new immunoblot assay (Helico Blot 2.1, Genelabs, Singapore).

### Results

A total of 65 patients were evaluated. There were 24 *H. pylori* positive patients based on the reference tests. The sensitivity of this immunoblot assay was 91.7% (95% CI: 80.7-102.7) and specificity was 80.5% (95% CI: 68.4-92.6). The Positive Predictive Value was 73.3% (95% CI: 57.5-89.1) while the Negative Predictive Value was 94.3% (95% CI: 86.6-102.0)

### Conclusion

Helico Blot 2.1 showed satisfactory sensitivity and specificity for diagnosing *H. pylori* infection in a multi-ethnic population in Malaysia.

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# The Helicobacter pylori Demographics in the Malaysian Setting Based on Rapid Urease Testing During Endoscopy

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## Summary

### Background

Malaysia is a multiracial country comprising three culturally diverse ethnicities which include Malays, Chinese and Indians. We embarked on this study to illustrate the different patterns of Helicobacter Pylori infection in our multiracial population.

### Materials and Methods

A retrospective analysis of data from Oesophago-Gastro-Dudenoscopes (OGDS) performed at our center from 1st January 2002 to 31st December 2003 was conducted. *H. Pylori* testing were performed using our own institutionally prepared rapid urease test.

### Results

A total of 6,583 patients with 56% males and 44% females with age  $52 \pm 15$  (range 12-91) years with 42% Malays; 29% Chinese; 27% Indians and 2% of other races/foreigners were analyzed. A total of 1213 patients were tested positive for H.pylori (18.4%). The latter group consisted of 52% males and 48% females at age  $53 \pm 15$  (range 14-88) years with 23% Malays; 32% Chinese; 45% Indians. The Urease test was positive in 10% of Malay patients, 20% of Chinese patients and 31% of Indian patients. In the Indians *H. pylori* infection was more common in the (41-50 years) age group among the females and the (61 -70 years ) age group among the males. However in the Chinese *H. Pylori* infection is commoner in the older age group (61-80 years) among both males and females. Incidence of *H. pylori* was constant throughout all the age groups in the Malays irrespective of gender. There were 167 cases of gastric ulcers, 71 duodenal ulcers (20 patients with both duodenal and gastric ulcers), 553 gastritis, 182 duodenitis and 240 with normal OGDS in the *H. Pylori* positive group. It was noted that 28.4% of Indians, 19.8% of Chinese and 10.9% of Malays who had duodenal ulcers were *H. pylori* positive. On the other hand 38.3% Indians, 32.7% Indians and 15% Malays who had gastric ulcers were tested positive for H.pylori.

### Conclusion

The highest percentage of *H. pylori* positivity was found among the Indians followed by the Chinese and then the Malays. Despite the high incidence of duodenal and gastric ulcers in Malays, the *H. pylori* positivity was surprisingly low as compared with the Indians. We postulate that varied living environment, diverse eating habits, use of traditional medications may explain this difference in our multiracial community.

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# The Role of Gastroesophageal Reflux Disease in Chronic Idiopathic Laryngitis: Prevalence and Response to Treatment with Proton Pump Inhibitors

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## Summary

### Background

Gastroesophageal reflux disease (GERD) has been thought to cause chronic laryngitis through laryngopharyngeal reflux. Response of laryngitis to treatment with potent acid suppression therapy will support this causal link.

### Objectives

1. To study the prevalence of GERD amongst Malaysian patients with chronic laryngitis.
2. To determine the response to treatment with proton-pump inhibitor therapy.

### Materials and Methods

Patients with chronic idiopathic laryngitis were recruited from the ENT clinic, University Malaya Medical Centre. Patients included had laryngeal symptoms for at least 3 months and laryngoscopically proven laryngitis. All patients underwent baseline assessment of their reflux (reflux symptom score (RSS)) and laryngitis (laryngitis symptom score (LSS)) symptoms, laryngoscopic examination for grading of laryngitis (laryngoscopic grading (LG)), esophagoduodenoscopy and 24-hour ambulatory pH monitoring. Patients were then prescribed lansoprazole 30mg bd for 8 weeks. The investigator who assessed the patients' symptoms was blind to the GERD status of the patient.

### Results

Thirty-two patients completed the study. Twenty-one (65.6%) patients were diagnosed to have GERD. The mean LG in GERD patients decreased significantly ( $p < 0.001$ ) from 2.14 to 1.05 at exit. Similarly, the LSS also decreased significantly ( $P < 0.001$ ) from 30.48 to 17.95 at exit. Whereas in the non-GERD patients, no similar decrease in both the LG (pre=1.83 and post =1.67,  $p=0.589$ ) and LSS (pre=24.08 and post =21.67,  $p=0.059$ ) were observed.

### Conclusion

The prevalence of GERD amongst patients with chronic idiopathic laryngitis in our population was high (65.6%). The response to treatment with PPI in GERD but not in non-GERD patients underlined the critical role of acid reflux in a subset of patients with chronic laryngitis.

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# The Diversity of Achalasia Cardia: The Five Years Kuala Lumpur Hospital Series

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## Summary

### Background

Achalasia cardia, not an uncommon disease, is diagnosed based on a good history, upper endoscopy, barium swallow, and standard esophageal manometry, is often diagnosed late and best care is delayed.

### Materials and Methods

Complete records of treatment naïve patients with achalasia from 1st January 2000 till 20th November 2004 were reviewed.

### Results

A total of 42 patients, with average presenting age at  $45 \pm 17$  (range 19-83) years with 15 males:27 females with 22 Malays:15 Chinese:5 Indians, were analysis. Compared to our upper endoscopy attendees, there is a trend towards a younger age group ( $p > 0.05$ ) but clearly demonstrating a female preponderance ( $p < 0.005$ ) and towards the Malays but sparing the Indians ( $p < 0.05$ ). The classical symptom of dysphagia was noted in all cases (100%). Regurgitation in 37 patients (88%), heartburn in 15 patients (36%), weight loss in 10 patients, nocturnal cough in 16 patient, retro-sternal chest discomfort in 2 patients and hemetemesis in 2 patient. One patient presented with aspiration pneumonia and another had concomitant active pulmonary tuberculosis and 9 had concomitant constipation (21%). The duration of illness before diagnosis was  $66 \pm 90$  (range 3-360) months and their presenting weight was  $52 \pm 12$  (range 33-82) kg. Barium swallow examination confidently diagnosed achalasia in 28 patients (67%). The remaining was marked as dysmotility disorder (7 cases), possible carcinoma of the esophagus (in 2 patients) and dysmotility with possible achalasia (in 5 patients). Ten had mega-esophagus and two had epiphrenic diverticulum with no pseudo-achalasia. Standard esophageal manometry, performed in 39 cases, all demonstrated aperistalsis with one vigorous achalasia. The manometric assembly failed to pass through the sphincter in 14 cases (36%), includes 8 patients with mega-esophagus, and LES assessment was not possible. Four cases demonstrated normal LES pressure but demonstrated incomplete relaxation (normotensive achalasia). Dilatation was performed with a 30 mm Rigiflex pneumatic dilator under fluoroscopy at 7psi for 3-30 seconds after loss of waist in 40 patients without complications and excellent symptomatic relief with 3-12 months post procedural weight gain of  $7 \pm 5$  (range: 0-19) kg. Six patients required a second dilatation and another required two further dilatation. The pneumatic dilatations durability during this short study was excellent at  $29 \pm 11$  (range 8-48) months. Similar efficacy and safety profile was noted in patients with mega-esophagus.

### Conclusion

Barium swallow (especially in advanced disease) and manometry (especially in early disease) serve as essential tools for the diagnosis of achalasia and they complement each other. We report two patients presenting with hemetemesis. We obtained excellent results with pneumatic dilatation without any complications and this extends to advanced cases of achalasia with mega-esophagus.

# Laparoscopic Nissen Fundoplication in Heartburn Cases

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## Summary

The development of laparoscopic techniques has opened a new dimension of gastrointestinal surgery particularly in the treatment of gastro-oesophageal reflux disease. Laparoscopic Nissen fundoplication (LNF) is now a routine and standard treatment for gastro-oesophageal disease (GERD) condition in many countries. It is safe and effective with little morbidity as compared to the open surgery and avoids the patient from disease progression as well as preventing long-term medication with either H<sub>2</sub>-antagonist or the proton pump inhibitor. The techniques itself has been subjected to much controversy relating to short gastric vessel division, partial or total wrap and hiatoplasty repair. This series present the first seventeen cases of laparoscopic Nissen fundoplication (LNF) performed in Malaysia for GERD by a single surgeon. The surgery commences with a Hasson's insertion for the first trocar. A special Nathanson's liver retractor was used to lift the liver and three additional trocars were inserted to start the LNF. All patients had full gastric fundus mobilisation for a floppy 3-4cm wrap using interrupted silk sutures. No bougie was used and all patients also had a posterior hiatoplasty repair. At six weeks nearly all patients underwent an upper gastroscopy as a standard post-operative assessment. Average operating time was less than 2 hours with one patient complicated by a pneumothorax where a chest tube was inserted at the end of the procedure. No other complication or mortality recorded. Most patients were discharged on the second or third post-operative day. At six weeks, none of the patient complaint of dysphagia or heartburn. All the patients so far are free from medications. The author feels that LNF is a very good option for GERD management and allows patient to choose between long-term pharmacologic therapy verses surgery with little or no morbidity.

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# Duodenal Carcinoid : A Rare Occurrence in a Young Patient

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## **Summary**

Duodenal Carcinoids are rare tumours. Although gastrointestinal carcinoids accounts for more than 95% of all carcinoids, the duodenum is the second least common site for carcinoid tumours. These tumours are usually diagnosed incidentally on histopathological reports following resection or biopsy of the primary lesion. Here we present a rare case of a duodenal carcinoid in a 16 year old girl and its management.

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# Endoscopic Reduction of Gastric Volvulus and Fixation by PEG: A Case Report

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## Summary

Gastric volvulus is an uncommon condition that may lead to difficulty in making a diagnosis and giving proper treatment. A 75 year old Malay man was admitted for repeated episodes of post prandial vomiting. He is on nasogastric feeding following a cerebrovascular accident secondary to his hypertension. He also suffers from ischaemic heart disease and congestive cardiac failure making him a poor surgical candidate.

Radiological investigations were consistent with an acute gastric volvulus. An OGDS was performed and it spontaneously reduced. In view of the high surgical risk and risk of recurrence, a PEG insertion was chosen to anchor the stomach to the anterior abdominal wall. No immediate complication was seen. A repeat barium meal confirmed partial reduction of the volvulus and patient was able to tolerate feeding well since then.

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# A Prospective Comparison of Percutaneous Endoscopic Gastrostomy and Nasogastric Tube Feeding in Patients with Acute Dysphagic Stroke

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## Summary

### Background

Dysphagia following stroke has a potential for malnutrition. NG and PEG tube feeding are recognized methods for nutritional support. The former is associated with tube dislodgement and blockage that compromise patients' nutritional status.

### Objective

To compare PEG with NG tube feeding after acute dysphagic stroke in terms of nutritional status and treatment failure.

### Materials and Methods

This was a randomized prospective clinical trial. 23 consecutive patients were recruited from Hospital UKM. Diagnosis of ischaemic stroke was based on clinical and brain CT findings. Diagnosis of dysphagia was done by using 'Swallowing test'. At recruitment, upper-arm skin fold thickness and mid-arm circumference were measured and blood was drawn for serum albumin and repeated 4 weeks later.

### Results

Twenty-two patients completed the study (12 NG, 10 PEG). Serum albumin ( $p = 0.045$ ) were significantly higher in PEG group after 4 weeks. There were significant improvements in serum albumin ( $p = 0.024$ ) in PEG group; and significant reductions in serum albumin ( $p = 0.047$ ) in NG group after 4 weeks. There were no significant differences in anthropometric parameters and no significant changes in these parameters for each group after 4 weeks. Treatment failure occurred in 5 patients in NG but none in PEG group ( $p = 0.036$ ).

### Conclusion

PEG tube feeding is more effective than NG tube feeding in improving the nutritional status (serum albumin) of patients with dysphagic stroke. NG tube feeding, in fact, reduced the nutritional status (serum albumin) of the patients.

**Key Words:** NG - nasogastric , PEG- percutaneous endoscopic gastrostomy.

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# Advanced Upper GI Malignancy: Whose Fault?

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## Summary

### Background

Upper gastrointestinal (GI) malignancy is not very common in our population compared to other countries such as Japan and China. However, most of the cases were diagnosed v late with metastases.

### Aim

To determine the reasons for late presentation and identify area of improvement in future.

### Materials and Methods

We reported 5 cases of advanced upper GI malignancy who presented to us within 3 months period from November 2004 and January 2005.

### Results

Five patient were diagnosed as advanced upper GI malignancy within 3 months period. They are 2 cases of stomach carcinoma , 2 cases of esophagus carcinoma and 1 case of carcinoid tumour of the stomach. The mean age was 51.4. Two are Malays and the others are Chinese, Indian and Sabahan each. All cases were diagnosed by endoscopic procedure and confirmed by histological examination. All endoscopic procedure were preformed within a week of presentation in the hospital except for carcinoid tumor which was diagnosed by a private physician. Both esophageal carcinoma involved the lower third and CT scan revealed hepatic and lung metastases. A case of stomach carcinoma presented with gastric perforation and emergency laparotomy noted perforated antral tumor with multiple liver nodules. Another case of stomach carcinoma presented with gastric outlet obstruction and laparotomy revealed huge antral tumor with sealed perforation by adjacent liver lobe. The tumor invaded into the pancreas and transverse colon with ascitis and peritoneal seedlings. An intra operative finding for the carcinoid tumor of the stomach was huge antral mass which adhered into the head of the pancreas. All gastric carcinoma cases were treated as gastritis for more than a year at pheriphery clinic or private practitioners. Both esophageal carcinoma and carcinoid tumor patients were also treated as gastritis for 3 months at pheriphery clinic before they were admitted or referred to specialist clinic.

### Discussion

All our five cases of upper GI malignancy were diagnosed as advanced either with liver, lung metastases or locally advanced tumor. However, they presented early to pheriphery clinic but unfortunately were treated as gastritis. 'Gastritis' is a symptom rather than the diagnosis until proven by endoscopy and ultrasound. The 'gastritis' may indicated multiple differential diagnosis from the simple benign peptic ulcer disease, GERD and gallstone to catastrophic event such as malignancy. If the standard endoscopy procedure is not performed to confirm the diagnosis, the early cancer can be missed which lead to the delay in the definitive treatment. Early detection of malignancy will enable the surgeon to perform curative resection to the patient.

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# Sporadic Form of Gastric Carcinoid: A Case Report

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## Summary

We report a case of a 68 year old lady who presented with epigastric pain and mass for 2 months' duration. Endoscopic examination revealed a huge polypoidal growth with central ulceration at the pyloric antrum. Biopsy revealed gastric carcinoid and CT Abdomen was subsequently performed showing a localized antral lesion measuring 3cm with adjacent pancreatic head infiltration. Subtotal gastrectomy with Billroth II gastrojejunostomy was performed. Serum gastrin was within normal limits. We review the literature of this rare malignant tumour, discuss the types of gastric carcinoid present, its clinical presentation and modality of treatment as well as prognosis.

Gastric carcinoids make up less than 1% of all gastric neoplasms. Three types of the conditions have been described. The type of the disease correlates with the prognosis and management is based on the type, size and nature of the lesion. Most sporadic lesions have metastasized at the time of presentation, but less often may present with localized disease which requires radical surgery. We present a case of sporadic gastric carcinoid and review the relevant literature.

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# Changing Epidemiology of GERD and Duodenal Ulcer with Widespread *Helicobacter pylori* Eradication

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## Summary

### Introduction

*Helicobacter pylori* was strongly associated with duodenal ulcer and probably protective against GERD. With widespread *H. pylori* eradication therapy, the prevalence of duodenal ulcer and GERD were expected to reduce and increase respectively. The aim of the study was to determine the trend of prevalence of duodenal ulcer and GERD in Malaysia.

### Materials and Methods

Retrospective study between January 2002 and April 2005 in Hospital UKM. All patients with both GERD and duodenal ulcer were identified from endoscopy file and the prevalence was calculated over the years. Patients age, gender, ethnic and endoscopic findings were collected and entered in database.

### Results

A total of 2171 patients were identified. The prevalence of GERD increased from 4.7% in 2002 to 20.5% in 2005 (up to April) whereas the prevalence of duodenal ulcer remained static over the years (~3.3%). However prevalence of gastric ulcer had increased slightly from 5.5% in 2002 to 7.2% in 2005. Median age of GERD was reduced over the years from 57 years to 51 years whereas proportion female GERD patients was increased over the years from 32.4% to 50.8%

### Conclusion

The prevalence of GERD is increasing while gastric ulcer and duodenal ulcer remained almost static for unknown reason. GERD patients tend to be younger and female predominance. Further prospective study is necessary to determine the etiology of the peptic ulcers.

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# A Rare Cause of Upper Gastrointestinal Bleeding from AVM of Stomach in Children: A Case Report

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## Summary

Haemorrhage from upper gastrointestinal tract (GIT) is commonly due to bleeding peptic ulcer disease, oesophageal varices and Mallory-Weiss tear. On the other hand, bleeding from stomach arteriovenous malformation (AVM) is an extremely uncommon occurrence. Locating a gastric AVM can be successfully made by OGDS, but its role is limited in an actively bleeding lesion. Endoscopic ultrasound (EUS) has been proven to accurately detect submucosal lesion. We report a case in a 14-year old boy with chronic, intermittent upper gastrointestinal bleeding. Endoscopic ultrasound revealed a 6mm submucosal lesion at the fundus of the stomach. This was subsequently resected and the histopathological examination revealed a gastric AVM. The diagnostic difficulty in this case is discussed.

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# Characterization of the Endoscopic and Standard Esophageal Manometric Features of Systemic Sclerosis (Scleroderma) and its Correlation with Symptomology

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## Summary

### Background

Scleroderma or Systemic sclerosis is a generalized systemic autoimmune disorder frequently involving the esophagus causing esophageal symptoms, with or without reflux oesophagitis, in the majority of patients. We embark to characterize the endoscopic and standard esophageal manometric features of scleroderma and to elucidate the correlation with symptoms.

### Materials and Methods

Patients with clinical features of scleroderma with either confirmation of a skin biopsy or immunological markers or both from 1st Disember 1999 till 1st March 2005 with or without symptoms attributed to the esophagus (dysphagia, heartburn, regurgitation and non-cardiac chest pain) referred for an esophageal assessment, which includes an upper endoscopy and standard esophageal, were analyzed. Standard Esophageal Manometry was performed using a low compliance pneumo-hydraulic pump with a water perfuse 8 channel manometric catheter with either a sleeve assisted (Dentsleeve®) or standard 4 radial sensors to measure the sphincter function and pressure.

### Findings

A total 21 patients, with average presenting age at 42±15 (range: 15-59) years with 4 males: 17 females with ethnic distribution of 8 Malays: 8 Chinese:5 Indians, were analyzed. A total of 15 patients (71.4%) had one or more symptoms attributable to the esophagus. The symptom of dysphagia was noted in 11 cases (52.3%), heartburn in 10 patients (47.6%), Regurgitation in 1 patient (4.5%), non cardiac chest pain in 3 patients (14.3%), while 6 patients had no symptoms attributable to the esophagus (28.6%). Erosive esophagitis was noted in 8 patients (38%, LA classification: A (2 patients), B (2 patients), C (3 patients) and D (1 patients with concomitant stricture). Manometry revealed absence of peristalsis in the esophageal body in 13 patients (61.9%) and segmental peristaltic failure in 2 patients (9.5%). In these subgroups the LOS pressure was 7±5 (range 0-18.7) mmHg (9 patients with sphincter pressure ≤ 5 mmHg) and all demonstrated adequate relaxation. These esophageal assessments were abnormal in 16 patients (76%) including 4 patients with no esophageal symptoms. There is no correlation between esophageal symptoms with endoscopic findings ( $X^2 = 0.48$ ) and between symptoms with abnormal manometric findings ( $X^2 = 0.74$ )

### Conclusion

Esophageal manifestation is common in patients with scleroderma with our without symptoms attributable to the esophagus. However there is no correlation of symptoms with either endoscopy or manometry. This study strongly suggests that all patients with scleroderma with or without esophageal symptoms should be evaluated with an upper endoscopy and a standard esophageal manometry.

# Clinical and Manometric Characterization of Nutcracker Esophagus

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## Summary

### Background

Nutcracker Esophagus (NE) is an uncommon primary esophageal motility disorder characterized by normally propagated (peristaltic) esophageal contraction displaying abnormally broad and high amplitude (> 180 mmHg) contractions in the distal esophagus. It's the most common manometric finding in patients with unexplained (non-cardiac) chest pain.

### Case presentations

**Case 1:** A middle aged Indian lady presented with intermittent dysphagia to solids, non specific chest discomfort and heartburn. A barium swallow showed features in keeping with a corkscrew esophagus. Esophageal manometry revealed peristaltic contraction but the mid and lower esophageal pressures were of high amplitude (>180 mmHg), broad (>7.2 sec) with occasional multi-peak waves. She obtained marked relief with diltiazem.

**Case 2:** A middle aged Indian Muslim lady presented with non specific chest pains and had been extensively investigated. An Upper Endoscopy examination was normal. Standard esophageal manometry revealed peristaltic contractions with multipeaked, broad (6.3 sec) and high amplitude contractions (>180 mmHg) at the lower end of the esophagus. She was initiated on diltiazem with mild improvement.

**Case 3:** A 63-year-old Chinese lady with hypertension was referred by her cardiologist for intermittent retrosternal chest pain with intermittent dysphagia. Her stress test and Technetium scan was negative. Barium Swallow revealed tertiary contractions at the lower end of her esophagus with no significant hold up of barium. Her endoscopy was normal. Standard esophageal manometry revealed a resting basal sphincter pressure ranging from 20-26 mmHg with normal relaxation. Her esophageal body contractions were peristaltic with broad, multipeaked and high amplitude (> 180 mmHg) contractions in her lower third of her esophagus. She obtained relief with diltiazem and omeprazole. Coronary angiogram 14 months later revealed single vessel disease and angioplasty with stenting was performed.

### Discussion

NE needs to be considered in any patient with functional dysphagia and non cardiac chest pains. We describe a patient who has the classical radiological feature of diffuse esophageal spasm (corkscrew appearance) but her manometry clearly defines a NE. The changing pattern between the spastic motility disorders (DES, NE and Achalasia) is well described. The spastic esophageal disorders may obtain relief with calcium channel blockers. It is vital to exclude coronary artery disease before tagging a diagnosis of NE, as missing a coronary artery disease may have grave consequences.

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# Gastrointestinal Manifestation of Amyloidosis and the Standard Oesophageal Manometric Characterisation

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## Summary

### Introduction

Amyloid is an insoluble, eosinophilic complex glycoprotein that demonstrates green birefringence under polarized light after Congo red staining. The chief sites of intestinal amyloid deposition are the blood vessel walls (producing ischemia and infarction), the muscle layers of the intestine (causing dysmotility), and the muscularis mucosa (impairing absorption). Amyloidosis may cause gastrointestinal symptoms extending from the mouth to the anus. We describe a rather rare case of systemic amyloidosis with gastrointestinal manifestations.

### Case presentation

A 55 year old Malay lady presented with a 7 year history of hoarseness of voice and progressive inability to swallow solids with some regurgitation. The ENT examination (indirect laryngoscopy) demonstrated a very bulky and inflamed arythenoids. She was referred to our unit to rule out Gastrointestinal Reflux Disease. Clinically she exhibited coarse facies and macroglossia. Gastroscopy revealed oedema of the mucosa of the stomach and duodenum and occasional "spontaneous simultaneous contractions" with absent lumen occlusive contractions in her oesophagus. We proceeded with a standard oesophageal manometry examination which revealed very low amplitude oesophageal contractions <20 mmHg (normal 30-180 mmHg) with frequent segmental failure. The Lower Oesophageal Sphincter pressure was very low at <4.5 mmHg (normal 5-10 mmHg) with adequate relaxation. These features were consistent with infiltration of the oesophageal musculature. Histopathology of the upper gastrointestinal tract revealed features in keeping with amyloidosis. The patient also exhibited infiltration of various other organs namely the vocal chords and the skin (both proven by biopsies) and the cardiac septum (echocardiogram). The tumour markers, blood dyscrasias and connective tissue screening has been negative to date. A CT Scan of the thorax and abdomen did not exhibit any other solid organ involvement. There is no specific therapy for primary amyloidosis hence the patient is being managed conservatively presently with appropriate counselling of her disease.

### Conclusion

Infiltration of the gastrointestinal musculature can occur in systemic amyloidosis and standard oesophageal manometric characterisation can aid in the diagnosis of this rare presentation. Infiltrative oesophageal disease presents with features in keeping with a "hypotensive" motor disorder akin to scleroderma. Endoluminal biopsies must be taken to exclude this condition.

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# The Uncommon But Important "Tongue" That We Should Screen

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## **Summary**

### **Objective**

Gastroesophageal Reflux Disease (GERD) is increasing in Asia. Barrett's esophagus which is one of the disease spectrum of GERD is expected to increase. The aim of the study is to determine the prevalence of Barrett's esophagus in Malaysia.

### **Materials and Methods**

Study conducted from January - April 2005 in Hospital UKM. All consecutive patients who underwent upper endoscopy for various indications will be screen for Barrett's esophagus. Biopsies will be taken from those patients who had endoscopic feature of Barrett's esophagus. Barrett's esophagus is confirmed if there is specialized intestinal metaplasia on histology examination.

### **Results**

A total of 279 upper endoscopies were performed during study period. Eleven (3.9%) patients had endoscopic feature of short segment Barrett's esophagus but only 3/11 (27.3%) had histology confirmation. No patients had dysplasia on histology. Thus the prevalence of Barrett's esophagus was 1.1%. Median age was 57 (42-66) years. All were male with 2 Malay and one Chinese. Two patients had dyspepsia and one had chronic reflux symptoms.

### **Conclusion**

Prevalence of Barrett's esophagus remained low in Malaysia. However thorough screening and biopsies are justified to detect this uncommon but important pre-malignant condition.

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# A Review of 10 Patients with Achalasia and Megaesophagus: Hospital Kuala Lumpur Experience

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## Summary

### Introduction

Megaesophagus is defined as an esophagus measuring 8cm or larger on the barium swallow examination in a patient with Achalasia cardia. Its existence defines a late stage of achalasia and therapy will include an esophagectomy in its management. The latter carries a high morbidity and mortality.

### Materials and Methods

We reviewed retrospectively all treatment naïve patients with Achalasia from 1st January 2000 and identified 10 patients with megaesophagus and these patients were analysed.

### Findings

The average presenting age is  $52\pm 15$  (range 20-73) years with 4 males: 6 females with 5 Malays:3 Chinese:2 Indians. The duration of illness before diagnosis was  $7\pm 5$  (range 1-16) years. All patients had dysphagia, regurgitation and weight loss. All 10 patients demonstrated aperistalsis but interestingly 8 patients failed Lower Esophageal Sphincter (LES) intubation during Standard Esophageal Manometry due to coiling of the catheter. Failure to elicit Failure of LES relaxation translates as a high technical failure of manometry (80%) in the diagnosis of Achalasia. A confident diagnosis of Achalasia was made on barium swallow in 9 cases (90%). All 10 patients underwent pneumatic dilatation. Eight patients required only single dilatation. However two patients required two dilatations. The durability of the twelve pneumatic dilatation  $27\pm 13$  (Range: 9-44) months with good symptomatic relieve and an objective post procedural weight gain of  $10\pm 6$  (range:1-19) kg over a period of 3-12 months. There was no complications noted post procedure.

### Conclusion

In advanced cases of Achalasia, barium swallow is superior to manometry for obtaining the diagnosis. Pneumatic dilatation is an effective and safe procedure for patients with megaesophagus.

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# Human Leucocyte Antigen Determinants of Susceptibility to Barrett's Oesophagus in Asians – A Preliminary Study

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## Summary

### Background

Characteristic immune profiles have been demonstrated in gastro-oesophageal reflux disease. However, the genetic basis of gastro-oesophageal reflux disease remains unclear.

### Aim

To investigate whether certain human leucocyte antigen genes are associated with Barrett's oesophagus.

### Materials and Methods

Asian patients of Malay, Chinese and Indian descent with Barrett's oesophagus (n=59) and those without reflux symptoms and a normal oesophagus (n=60) were recruited prospectively using endoscopic and histopathological criteria. Human leucocyte antigen class I and II typing was performed using a polymerase chain reaction sequence-specific primers method.

### Results

The HLA-B7 allele was present in 17% (10 of 59) of patients with Barrett's oesophagus when compared with 0% (zero of 60) of controls [P=0.0006, corrected P=0.0171, OR=25.67]. Subgroup analysis revealed that the HLA-B7 allele was confined almost exclusively to Indians with Barrett's oesophagus, 43% (nine of 21) vs. 0% (zero of 19) Indian controls (P=0.0014, corrected P=0.0404, OR=29.64).

### Conclusion

Barrett's oesophagus in Asians, particularly Indians, is strongly positively associated with HLA-B7; reinforcing a genetic component to gastro-oesophageal reflux disease. A larger sample size and different ethnic populations should be genotyped to further confirm this association and identify possible additional risk factors in the human leucocyte antigen locus.

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# Dysphagia Aortica

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## Summary

### Introduction

Dysphagia in the elderly can arise from benign or malignant strictures, neuromuscular disorders and extrinsic compression of the oesophagus. Extrinsic compression by a vascular structure is uncommon and usually this is due to an aberrant subclavian artery. However extrinsic compression by aorta is rare and we present one such case.

### Case Report

An 80 year old Malay man presented to us with a 6 months history of progressive dysphagia and lost of five kilograms in weight. He had a past medical history of an abdominal aortic aneurysm repair and ischemic heart disease. An upper gastrointestinal endoscope was done and this revealed an external compression at the lower end of the oesophagus from about 35 to 40cm below the incisors. Barium swallow also revealed a mild dilatation of the proximal oesophagus with transient hold up of contrast just above the junction of the cardio-oesophageal junction. We subsequently carried out an endoscopic ultrasound which demonstrated a large abdominal aortic aneurysm with possible dissection compressing on to the oesophagus. There were free echo shadows within the aorta suggesting stagnation of blood flow. CT abdomen revealed an abdominal aortic aneurysm extending from the epigastric to the suprarenal region with no evidence of dissection. The patient was not considered fit for surgery and was subsequently given liquidised diet which he tolerated well.

### Conclusion

We clearly demonstrated that endoscopic ultrasound is a useful tool not only for staging intraluminal oesophageal malignancies but also to diagnose vascular compression of the oesophagus.

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# Preliminary Study of Microsatellite Instability Status of Gastric Carcinoma by Immunohistochemistry

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## Summary

### Introduction

Microsatellite instability is a manifestation of defective DNA mismatch repair. Immunohistochemistry (IHC) is a simple method assessing mismatch repair (MMR) gene proteins and monoclonal antibodies against hMLH1 and hMSH2 are now commercially available. The initial work was done on sporadic colorectal cancer, and the subset of sporadic colorectal cancer has shown a better prognosis and response to treatment. Immunohistochemistry is a convenient method compared to gold standard.

### Materials and Methods

Five confirm cases of resected specimen of gastric adenocarcinoma (paraffin-embedded) from Department of Pathology, HUKM include 2 diffuse type and 3 intestinal type by Lauren's Classification were cut and stained by immunohistochemical method. Antibodies (Zymed) were used at a dilution 1:50 for hMLH1 and 1:250 for hMSH2. Normal gastric mucosa shows positive nuclear staining for both antibodies. Absence of normal staining in tumor cells for either antibodies indicate positive result (ie: microsatellite instability)

### Results

2 out of 5 cases show positive result both form MLH-1 antibody and both of them also from the intestinal type gastric adenocarcinoma. The rest were all negative.

### Discussions and Conclusion

This preliminary study indicated that the microsatellite instability is confined to the intestinal type of gastric adenocarcinoma. Forty percent is a big number compared to publish result. In our probability, the rate might be lower than this. Work is undergoing to confirm the cases by molecular.

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# The Role of Ethanol Injection to Complement Self-Expandable Covered Metallic Stent (SEMS) in Palliating Malignant Dysphagia

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## Summary

Ethanol has long been one of the main non-surgical palliative methods for malignant dysphagia. It has proven efficacy, very low morbidity and mortality and offers significantly longer patency period compared to dilatation alone. Infact its patency period is comparable to the rest of other palliative measures, namely stenting and laser coring. In some developing countries this has been the main palliative option as it is cheap and widely available. Recently self-expandable covered metallic stent has become superior to ethanol injection. One of the drawbacks to self-expandable covered metallic stent is its cost. Tumour overgrowth, blocking its either ends, thus recurrence of dysphagia, is another major problem.

We report here 7 cases of malignant dysphagia that benefit from ethanol injection either to render them feasible for stenting or to overcome tumour overgrowth. Three cases of newly diagnosed carcinoma of the oesophagus, with total occlusion of its lumen, deemed inoperable, because of their advance stage or the patient was unfit for major surgery. Ethanol injection with average of two sessions each had successfully widened those lumens to render stenting feasible. All three patients subsequently underwent radiotherapy. Another 4 patients had tumour overgrowth over previously placed stents. We successfully recanalized the occluded stents with ethanol injections and some of them underwent re-stenting.

It is apparent that with ethanol injection, those who were not feasible for stent, proved otherwise. A bulky tumour would definitely compromise the achievable lumen after stenting hence deterring the improvement from dysphagia. It would not be long before they come back with tumour overgrowth. Thus ethanol injection can be safely use to complement self-expandable covered metallic stent in palliating malignant dysphagia enabling patient to have longer dysphagia-free period and better quality of life.

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# Endoscopic Management of Bleeding Oesophageal Varices with N Butyl Cyanoacrylate (Histoacryl) – Preliminary Experience in a Tertiary Centre

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## Summary

### Background

The current accepted endoscopic treatment of choice for patients who present with acute bleeding oesophageal varices (OV) is endoscopic variceal ligation. Insufficient data exists on efficacy of treating bleeding (OV) with Histoacryl.

### Objectives

To analyse the efficacy of Histoacryl in controlling bleeding OV.

### Materials and Methods

We performed a retrospective analysis of all patients who presented to the hepatology service of our hospital with bleeding OV who were treated with Histoacryl as a primary method of achieving haemostasis. Patient records from 1st January 2004 to 1st April 2005 were reviewed. All patients underwent emergency upper gastrointestinal (GI) endoscopy within 24 hours of admission. All patients received the same standard of care including transfusion of blood products, pharmacologic therapy (octreotide or terlipressin) and prophylactic antibiotic therapy. Assessment of rebleeding was made using standard clinical and endoscopic parameters.

### Results

Thirteen patients were treated with Histoacryl for bleeding OV. Immediate haemostasis was achieved in all patients. Rebleeding within the first 24 hours occurred in 0 patients in the Histoacryl arm. During the first 2 weeks no patients in the Histoacryl arm had evidence of rebleeding. No patients in the Histoacryl arm showed clinical and/or radiological signs of pulmonary embolism

### Conclusion

Histoacryl injection for the management of bleeding OV appears to be efficacious in achieving primary haemostasis and preventing rebleeding within the first 2 weeks. No adverse events were noted in this group of patients. Thus our data supports the use of Histoacryl injection in patients with acute OV bleeding. A prospective randomised trial comparing Histoacryl to endoscopic variceal ligation is needed before this can be recommended as routine therapy

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# Oesophageal Carcinoma: Correlating Symptoms with EUS Staging

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## Summary

### Objective

To analyse whether the majority of patients with oesophageal cancer who present with dysphagia have advanced disease

### Materials and Methods

A retrospective analysis of patients with oesophageal cancer who presented to Hospital Selayang from January 2004 till March 2005. Only patients who had Endoscopic Ultrasound (EUS) performed for staging were included. Patients who had EUS performed for staging but then continued follow up in other centres were excluded from the analysis as insufficient data was available on this group of patients. Medical records were analysed to determine patient characteristics, presence of dysphagia and EUS staging

### Results

Thirty-six patients with oesophageal cancer had EUS performed for staging during the period of study. Eighteen patients fulfilled the inclusion criteria. Male to female ratio was 1.6 (11 males, 7 females). Mean age was 62.4 years. Ten patients had carcinoma of the distal oesophagus, 7 patients had carcinoma of the mid oesophagus and 1 patient had carcinoma of the upper oesophagus. Seven patients (39%) had adenocarcinoma, while 11 patients (61%) had squamous cell carcinoma on histology. All patients with adenocarcinoma had carcinoma of the distal oesophagus 16 patients (89%) presented with dysphagia. EUS staging of disease is shown in Table 1

**Table 1**

<b>EUS STAGE</b>	<b>No of patients</b>	<b>Dysphagia(no of patients)</b>
T1N1	2	0
T2N1	1	1
T2N1M1a	1	1
T3NO	1	1
T3N1	8	8
T3N1M1a	2	2
T3N1M1	1	1
T4N1	2	2

### Discussion

Only 2 patients in our series presented to us with potentially curable disease (T1NO or T2N0). Both these patients did not have dysphagia. Ten patients had loco-regionally advanced disease (T3 or N1). All these patients had dysphagia. They are best managed by neoadjuvant chemoradiation followed by surgical resection. Three patients with M1a disease also had dysphagia. Three patients had disease which was only suitable for palliation (T4 or M1). A point to note is that all patients with dysphagia had at least T3 or N1 disease. This correlates with loco-regionally advanced disease which requires multimodal therapeutic options for optimal outcome.

# Spontaneous Neonatal Gastric Perforation (SNGP)

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## Summary

Gastric perforation in the neonate is rare, occurring in 1 in 2900 live births. We report a 9-day-old female, term, small for date infant, born flat through a normal delivery, resuscitated, stabilized but who later presented with a distention of the abdomen. Abdominal X-ray examination showed pneumoperitoneum and initial diagnosis was perforated viscus secondary to necrotizing enterocolitis. After a brief resuscitation, an isolated perforation of the stomach was discovered on laparotomy and was sutured. Outcome of spontaneous gastric perforation in newborns is favourable provided the disease is early recognised and treated.

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# Gallbladder Empyema : An Overview

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## Summary

### Introduction

Acute cholecystitis is a complication of gallstone whereby the infection occurs in the wall of the gallbladder. Gallbladder empyema is a variety of acute cholecystitis where the mucosa becomes partly necrotic following severe infection.

### Materials and Methods

This is a retrospective study of the incidence of acute cholecystitis and gallbladder empyema in Seremban Hospital from January 2002 to December 2003. The diagnosis of gallbladder empyema was based on intraoperative finding and histological examination. A total of 122 cases of acute cholecystitis and 20 cases of gallbladder empyema were identified during these period.

### Results

The incidence of acute cholecystitis was higher amongst female (64.7%) compared to male (35.3%). The incidence amongst Malay ethnic group was the highest (47.7%) compared to Chinese (28.6%) and Indian (23.7%). The mean age group for acute cholecystitis was 46 year old and 65% of them were 50 year old and below. In 2000 and 2001, the number of elective cholecystectomy performed in this hospital were 21 and 34 cases. However, in 2002 and 2003, the number increased to 76 and 67 cases.

The incidence of gallbladder empyema in our population was 16.4%. The incidence was higher amongst male (55%) compared to female (45%) and was statistically significant. The incidence of gallbladder empyema also noted to be highest amongst Indian ethnic group (45%) compared to Malay (35%) and Chinese (20%). The mean age for gallbladder empyema was 53 year old. The association between age group and incidence of empyema was also statistically significant. There were no significant association between elevated liver enzymes and diabetes with the incidence of gallbladder empyema.

One third (35%) of gallbladder empyema cases were previously diagnosed as gallstone however elective cholecystectomy was delayed on various reasons. Seventy-five percent of cases were newly diagnosed during their acute admission. Half of these cases were previously treated as gastritis by periphery clinic or general practitioner without further investigation.

### Conclusion

High incidence of gallbladder empyema were due to delayed diagnosis and referral to the specialist clinic and inadequate elective cholecystectomy in the hospital. All patients with epigastric discomfort require prompt investigation to exclude gallbladder disease. Early detection of symptomatic gallstone and early cholecystectomy will reduce the incidence of gallbladder empyema.

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# Pyogenic Liver Abscess in Southeast Asian Patients

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## Summary

### Background

Liver abscess (LA) can cause significant morbidity and the organisms vary between different regions.

### Objective

This study assesses the characteristics of LA in Southeast Asian patients.

### Materials and Methods

Patients treated for LA (1999-2004) were identified and retrospectively reviewed.

### Results

Forty-two patients (mean age 47.6 years old [range 22-79], male=38, 91%) were treated for 49 episodes of LA. Two patients (post-Whipple's and diabetes respectively) had recurrent abscesses. Predisposing factors were; diabetes (47.7% [known diabetes 31% and newly diagnosed 16.7%]) and biliary pathologies (21.4%). The commonest presentations; fever (95.6%) and abdominal pain (69%). The LA were located; right lobe (80%), left lobe (11%) and both lobes (9%). Eighty-one percent had solitary abscess. The commonest organisms isolated were *Klebsiella* (46.8%) and *Burkholderia pseudomallei* (BP) (21.3%). No organisms (cryptogenic) were isolated in 21.3%. *Klebsiella* abscesses patients were older (54.9 vs. 38.1 years old,  $p=0.021$ ) and more likely to have diabetes (93.3% vs. 6.7%,  $p=0.005$ ) compared to patients with cryptogenic abscesses. BP patients were more likely to have diabetes compared to patients with cryptogenic abscess (90% vs. 10%,  $p<0.001$ ) and other organisms (81.8% vs. 18.2%,  $p=0.039$ ). Other organisms related abscesses were more likely to have biliary pathologies. Sixty-six percent required aspirations of the abscess and 33% need drainage catheter inserted. Complications were seen in 37%, with 12.2% needing intensive care admissions. All responded to antibiotics with or without drainage. There was no mortality associated with LA.

### Conclusion

*Klebsiella* and BP are common organisms causing pyogenic LA in Southeast Asian patients. Both *Klebsiella* and BP abscesses were associated with diabetes. Other organisms group was more likely to biliary pathologies. All responded to antibiotic treatment with or without drainages/aspirations.

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# Conversion Rate of Laparoscopic to Open Cholecystectomy in HUSM, Kelantan

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## Summary

### Introduction

Laparoscopic cholecystectomy is a minimally invasive technique and is considered the "gold standard" for the treatment of gall bladder stones. It has several advantages over traditional open cholecystectomy in terms of rapid recovery, less post operative pain and early ambulation.

### Objective

The aim of this study is to review our last 2-year experience with 75 patients in whom laparoscopic cholecystectomy was performed and to evaluate the conversion rate of laparoscopic to open cholecystectomy.

### Materials and Methods

All cases of laparoscopic cholecystectomy performed from January 2003 to December 2004 were evaluated.

### Results

There were 21 males and 54 females with a mean age of 45 years. Main indication for operation was gall stones (80%). The mean time to perform the procedure was 126 minutes. Twelve patients (16%) were converted to open cholecystectomy and the main reason for conversion was unclear anatomy in eight patients. Average duration of stay was 4 days. There was no mortality.

### Conclusion

Although unclear anatomy secondary to inflammation remains the most common reason for conversion, the impact of laparoscopic cholecystectomy still plays an important role in the treatment of gall bladder stone.

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# Case Report – Cholestasis and Dysphagia: An Association Between Primary Biliary Cirrhosis and Scleroderma

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## Summary

We describe an uncommon association between primary biliary cirrhosis (PBC) and scleroderma occurring in a patient. A 40 year old Indian lady was referred to us with a 7 year history of dysphagia, heartburn and mild weight loss. On presentation in 2002 she was also found to have deranged liver function tests on routine examination. There was no history of pruritus, jaundice, blood transfusions, IV drug abuse, traditional or prescription drug use. Examination revealed a pale, slim lady with beaking of nose, loss of facial wrinkles and tight shiny skin predominantly on the hands and skin hyperpigmentation. There was no calcinosis, digital ulceration, Raynaud's phenomenon, telangiectasia, hepatosplenomegaly, jaundice or chronic liver disease stigmata. Blood tests showed the following: Total bilirubin 6mmol/l, ALT 74 u/l, Alkaline Phosphatase 214u/l, Haemoglobin 8.5 gm/dL, MCV 67fl. HBsAg and anti HCV Ab negative, normal ferritin level, ANA reactive, antimitochondrial Ab weakly positive (1:20), serum IgG 14.3g/l(6.9-16.1), IgM 2.92g/l(0.6-2.63), extractable nuclear antigens negative, rheumatoid factor negative and normal serum complement levels. Upper endoscopy – GORD LA grade D with peptic stricture. Normal lung function tests, HRCT thorax and liver ultrasound. Manometry was characteristic of esophageal scleroderma. Liver histology showed paucity of interlobular bile ducts, noncaseating granulomas and inflammatory infiltration of portal tracts with interface hepatitis (Ludwig stage 2). She was treated with high doses of proton pump inhibitors and ursodeoxycholic acid (15mg/kg/day). There was near total resolution of dysphagia and heartburn. On subsequent follow up visits, there has not been any clinical or biochemical progression of liver disease.

## Discussion

Scleroderma is seen in 3-4 % of patients with PBC. Other associations of PBC include keratoconjunctivitis sicca (72%), arthritis (4-42%), autoimmune thyroiditis (15-20%) and renal tubular acidosis (50%). It would therefore be appropriate to screen PBC patients for immune mediated conditions. PBC may follow a course of 15-20 years. Symptoms of PBC develop in 40% of initially asymptomatic patients in 5-7 years of follow up. Once symptoms develop, the median survival time is about 10 years. The incidence of esophagitis in scleroderma is close to 100% especially in patients with severe cutaneous manifestations while peptic stricture is a complication affecting approximately 8% of scleroderma patients.

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# Female and Comorbidity Were Predictors of Significant Fibrosis in Hepatitis C Patients

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## Summary

### Introduction

Hepatitis C is a chronic and debilitating disease. Several risk factors were identified as predictors of fibrosis in Western series. However there is lack of data in this region. Therefore this study is to determine the predictors of significant fibrosis in Hepatitis C patients in Malaysia.

### Materials and Methods

This is a retrospective study from January 2000 to April 2005. All Hepatitis C with liver biopsy performed were identified and were traced from pathology department. Variable such as age, ethnic, gender, comorbidity, years of infection, previous IFN therapy, ALT level, serum albumin and PT were correlate with fibrosis stage 2 (Scheur classification) on liver biopsy.

### Results

Total of 24 liver biopsies was performed. Two was excluded because case note cannot be traced. Of 22 patients included, 59% was male. Median age was 41(19-68) years. Half of the patients were Malay. Forty one percent had significant comorbidity. Only 2 patients had interferon therapy prior to liver biopsy. Using univariate analysis, female ( $p=0.007$ ) and comorbidity ( $p=0.038$ ) were associated with significant liver fibrosis.

### Conclusion

Female and comorbidity were associated with significant liver fibrosis in Hepatitis C patients. Further prospective and larger cohort of Hepatitis C patients should be performed to confirm these findings.

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# Targeted Radiotherapy with Yttrium for Hepatocellular Carcinoma

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## Summary

### Introduction

SIR-Spheres are biocompatible radioactive micro-spheres that contain Yttrium- 90 and emit beta radiation.

Once the SIR Spheres are injected via the selected artery they will get trapped in the small blood vessels of the tumor. Once it reaches it's target it irradiates by a process known as Selective Internal Radiation Therapy (SIRT) leading to the destruction of the tumor. This therapy has been currently used in metastatic liver tumors (Australia, New Zealand, USA) and primary liver tumor (Hong Kong) .

### Materials and Methods

Patients who have failed standard therapy that is surgery, chemotherapy or interventional radiotherapy like ethanol injection and radiofrequency ablation were selected to have SIRT therapy.

There is 2 phases in the work up for the treatment.

#### Phase I

Patient would require a <sup>99m</sup>Tc MAA scan to assess the amount of shunting into the lungs and to determine uptake of tumour to liver ratio. 5mCi of technetium-99m labeled macro-aggregated albumin (<sup>99m</sup>Tc -MAA) introduced into the hepatic artery via the femoral approach to visualise the blood vessel distribution (diagnostic hepatic angiography). 1-3 hours later a radionuclide scan is performed to measure the counts/radiation levels in the target area and the lung in particular. Patients are ineligible if the shunting to the lung exceeds 10% or abnormal vasculature particularly to the duodenal area unless it's embolised prior to the procedure.

#### Phase II

Treatment via intrahepatic artery cannulation and selective injection of the SIR spheres. We would like to report a case of a 56 years old Chinese male with Chronic Hepatitis B infection who was diagnosed to have right lobe Hepatocellular carcinoma presenting with right hypochondrial pain. Further investigation revealed that he had a inoperable tumor. Various options of therapy were discussed and he opted to have SIR therapy. Following the MAA scan he received 2.5GBq of Yttrium- 90 into the right hepatic artery. He experienced transient pain over the right hypochondrium. CT scan done one month post treatment revealed massive necrosis within tumor site. Two months later he was noted to have wide spread disease involving the bone. Patient survived for 7months since the diagnosis was established.

### Conclusion

Yttrium SIRS therapy is an option of treatment for patient with hepatocellular carcinoma and it is well tolerated.

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# Obstructive Jaundice with Inconclusive Trans-Abdominal Ultrasound and CT Scan- What Next?

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## Summary

### Background

Transabdominal ultrasound scan (USS) and CT scan are the most common imaging modalities for the work up of clinical or laboratory features of obstructive jaundice. Endoscopic ultrasound (EUS) is more sensitive in visualizing the common bile duct (CBD) and can be used when these tests are inconclusive.

### Objective

To assess the ability of EUS to detect abnormalities when USS and CT are inconclusive (normal or dilated ducts with no cause found) in patients with obstructive jaundice.

### Materials and Methods

Retrospective review of obstructive jaundice patients who had EUS over 15 months (April 2003 to June 2004) in a tertiary referral center. All patients had USS and/or CT abdomen. EUS findings are compared to ERCP and/or surgical findings. If EUS was negative, patients were followed up and no further tests were done if laboratory parameters normalized. USS and CT are considered inconclusive if the biliary duct is normal or if the duct is dilated but the cause is not clear.

### Results

Forty one patients had inconclusive findings on USS abdomen and/or CT scan. M:F ratio is 19:22 and the mean age is 54.6 years (18-88). EUS showed choledocholithiasis in 17 patients (41%). This was confirmed on ERCP in 16 out of 17 cases. ERCP showed sludge in one patient. EUS showed distal CBD stricture or lesion in 5 patients (12%) which were confirmed either on ERCP or surgery. Eighteen (44%) patients had normal EUS with 13 presumed passed stone. One had mirizzi syndrome on ERCP and one had carcinoma head of pancreas on surgery. The remaining 3 were due to acute hepatitis B, autoimmune hepatitis and sepsis. One patient (0.02%) showed features of acute pancreatitis on EUS but ERCP showed stricture of CBD and surgery revealed cancer of the head of pancreas.

### Conclusion

The study confirmed that EUS is more sensitive in detecting choledocholithiasis and intraductal carcinoma compared to transabdominal USS and CT scan. EUS is therefore an important diagnostic modality in the work up of obstructive jaundice when USS abdo and CT scan are inconclusive.

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# Albumin Levels in Patients with Inoperable Cholangiocarcinoma – Does it Predict Survival?

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## Summary

### Objective

To assess whether serum albumin levels of patients with inoperable cholangiocarcinoma predicted their length of survival

## Materials and Methods

The medical records of all patients who were diagnosed to have cholangiocarcinoma from September 2003 till March 2005 were reviewed. Patients were staged using a combination of endoscopic retrograde cholangiography, computed tomography scans and endoscopic ultrasound. Patients were diagnosed to have unresectable disease if they had locally advanced disease, distant metastases, vascular invasion or were considered medically unsuitable to undergo major surgery. Serum albumin levels of patients on presentation were documented. Telephone calls to next of kin were made when data on length of survival was not available in the medical records.

## Results

During the period of study, 35 patients were diagnosed to have inoperable cholangiocarcinoma. There were 22 female and 13 male patients (M:F ratio – 1.7). Mean age of all patients was 63. Ten patients (29%) had distal cholangiocarcinoma, 20 patients (57%) had hilar cholangiocarcinoma and 5 patients (14%) had intrahepatic cholangiocarcinoma.

Table I shows the mean serum albumin and mean survival of all patients divided into their locality of disease. Table II shows a breakdown of survival of patients based upon albumin levels below 30 mmol/L or equal to or greater than 30 mmol/L

**Table I**

	<b>Hilar Cholangiocarcinoma</b>	<b>Distal Cholangiocarcinoma</b>	<b>Intrahepatic Cholangiocarcinoma</b>
Mean Serum albumin(mmol/L)	29	28	38
Mean Survival (months)	4.1	4.9	4

**Table II**

<b>Serum Albumin (mmol/L)</b>	<b>Mean Survival in months (No of patients)</b>		
	<b>HILAR</b>	<b>DISTAL</b>	<b>INTRAHEPATIC</b>
< 30	4.4 (11)	3.89 (8)	2 (1)
> 30	3.9 (9)	9 (2)	4.5 (4)

## Discussion

Mean survival did not differ significantly among patients with hilar, distal or intrahepatic cholangiocarcinoma. Even though mean serum albumin was much higher in the group of patients with intrahepatic cholangiocarcinoma, survival in this group was similar to the other groups. Survival was noted to be much longer in the group of patients with distal cholangiocarcinoma who had serum albumin levels greater than 30mmol/L. However, this group had a very small patient number and therefore statistical significance was not reached. Generally, higher serum albumin levels do not correlate with a longer survival period.

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# EUS Guided Fine Needle Aspiration of Biloma : A Novel Approach

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Selayang Hospital, Selangor, Malaysia

## **Summary**

A biloma is an encapsulated collection of bile occurring outside the biliary tree<sup>1</sup>. It is usually caused by a biliary leak which may be traumatic or iatrogenic in origin. Clinically significant bile leaks occur after 0.1% to 0.5% of conventional open cholecystectomy (OC) operations<sup>2</sup>. With the advent of laparoscopic cholecystectomy (LC) operations, biliary leak rates of up to 2% have been reported<sup>3</sup>. Conventionally bilomas have been treated by percutaneous or open surgical methods<sup>4</sup>. A variety of percutaneous, endoscopic and surgical methods have been proposed to treat bile leaks<sup>5</sup>. We report a case of a high grade (HG) bile leak occurring after OC resulting in biloma formation which was treated using a combination of Endoscopic ultrasound (EUS) directed fine needle aspiration and endoscopic stent placement.

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# Endoscopic Biliary Stenting in Patients with Inoperable Cholangiocarcinoma – Does it Improve Survival?

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## Summary

### Objective

To analyse whether endoscopic biliary stenting in patient with inoperable cholangiocarcinoma significantly improved survival.

### Materials and Methods

A retrospective analysis of all patients with inoperable cholangiocarcinoma who were diagnosed during the period from September 2003 till March 2005 was performed. Patients' medical records were reviewed and data regarding type of biliary stents used and length of survival was obtained.

### Results

Thirty-five patients were diagnosed to have inoperable cholangiocarcinoma during the period of study. Mean age in the group with stents was 64 and in the group without stents were 62. Twenty-two patients (63%) had endoscopic biliary stents placed for palliation of jaundice. Nine patients had self expanding metal stents (SEMS) and 13 patients had plastic stents placed. Mean survival of patients in the stented group was 4.9 months compared to 3.8 months in the non stented group (p value of 0.07)

Table I shows the number of patients in each group according to the location of their primary lesion. Table II shows the mean survival of patients in the stented versus the non stented group.

**Table I:**

Type of Cholangiocarcinoma	Stent		No Stent
	Plastic	Stent	
Hilar	9	5	6
Distal	3	4	3
Intrahepatic	1	0	4



**Table II**

	<b>Mean Survival (in months)</b>		
	<b>Hilar</b>	<b>Distal</b>	<b>Intrahepatic</b>
SEMS	5.2	5.5	-
Plastic	3.8	5	5
Non stented	3.8	3.7	3.8

**Discussion**

The results from our retrospective analysis show a trend towards increase survival in the stented group versus the non stented group. This is especially seen in the group of patients with distal cholangiocarcinoma. Our results did not achieve statistical significance. A larger series of patients is required to determine whether this trend observed does reach statistical significance.

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# Endoscopists' Experience is Irrelevant to Patient Tolerance to Colonoscopy - A Prospective Evaluation from a Large Tertiary Institution in Malaysia

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## Summary

### Introduction

It is believed that senior endoscopists perform colonoscopy with less discomfort to patients than those with lesser experience. However, with effective sedation and less tortuous Asian colons, this may not necessarily be the case.

### Objectives

To assess patient tolerance and colonoscopy outcomes between various endoscopists in a routine endoscopy list.

### Materials and Methods

Consecutive outpatients undergoing colonoscopy were enrolled and given sedation. Endoscopists' experience was divided into: < 1 year (group A), 1 – 5 years (group B) and > 5 years (group C). Details of colonoscopy and complications were recorded. After recovery, all patients recorded their tolerance on a pre-determined 100mm visual analog score (VAS).

### Results

Two hundred and eight patients (mean age  $57.2 \pm 14.8$  years, 44% female) underwent colonoscopy over six months. The mean doses of midazolam and pethidine used were  $5.0 \pm 1.1$  mg and  $43.3 \pm 14.0$  mg respectively. The majority of colonoscopies were performed by group A (n=145), followed by group B (n=49) and group C (n=14). No differences in patient characteristics, bowel preparation or level of difficulty of colonoscopy were noted. Group C endoscopists had a shorter mean duration of colonoscopy (19.8 mins, vs 28.9 mins group B, 28.2 mins group C;  $p=0.02$ ), a higher completion rate (99% vs 88% group B, 86% group C;  $p=0.03$ ), detected more organic pathology (50% vs 39% group B, 38% group C) and performed more therapeutic procedures (36% vs 24% group B, 19% group C). Group C patients did not suffer any cardiorespiratory complications, in contrast to the other groups. However, no differences in poor tolerance to colonoscopy were noted: 20% group A, 11% group B, 15% group C.

### Conclusion

Colonoscopy is performed better by experienced endoscopists, but this is irrelevant to patients' tolerance to the procedure. This is probably due to the amnesic effects of the sedatives that are currently used.

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# Experience in Conducting a Dedicated Colorectal Clinic – What to Expect?

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## Summary

### Background

Colorectal services in this country are rapidly emerging with the setting up of dedicated centers in numerous public and private healthcare institutions. There has been no local published data thus far to account for the cases seen in a devoted colorectal clinic and subsequent management or course of action. In order to address this, we prospectively followed up patients seen in a recently established colorectal clinic at a tertiary hospital.

### Materials and Methods

Clinics were conducted once a week from 9.30 to 12.30 p.m. on Mondays and data was collected prospectively for patients attending the clinic from April 2003 to March 2004. Patients with symptoms of rectal bleeding, alteration in bowel habit, anorectal symptoms and those requesting advice regarding screening for colorectal cancer were seen by a consultant and specialists. All patients operated upon for colorectal cancer were likewise reviewed in the clinic. A proforma was completed at the end of the consultation and the respective data analysed using SPSS software.

### Results

A total of 638 patients were seen, 331 (51.9%) of who were females. The mean age of the patients was 48.3 years (range; 14 to 89 years). The most common symptom recorded was rectal bleeding (56.1%), followed by constipation (32.3%). Proctoscopy (62.8%) and colonoscopy (26.1%) were the most common procedures performed. Three hundred and thirty-three (52.2%) patients were diagnosed with haemorrhoids while a diagnosis of colorectal carcinoma was made in 78 (12.2%) patients. Haemorrhoids (70.1%) accounted for the majority of patients presenting with rectal bleeding, followed by colorectal cancer in 8.1%. Patients requiring endoscopic evaluation for colorectal symptomatology for suspected malignancy had a mean waiting time of 15 days in comparison to 42 days prior to the establishment of the colorectal clinic. Patients with a confirmed diagnosis of colorectal cancer had their surgery performed within a mean period of 13 days following diagnosis.

### Conclusion

The majority of patients presenting to a dedicated colorectal clinic have haemorrhoids but a significant number have underlying colorectal cancer. Such a clinic enables improved patient care with focused attention and prompt intervention when necessary as demonstrated by the waiting time for endoscopic evaluation and surgical intervention. We stress the importance of conducting similar clinics in other surgical specialties to procure an optimal outcome for patients and in our goals towards achieving a high standard of healthcare comparable to that of a developed nation.

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# A Community Based Study on the Prevalence and Management of Haemorrhoids

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## Summary

### Aim

Asian patients are well known to resort to alternative or traditional medicine in managing a multitude of ailments. The aim of this study was to determine the prevalence of haemorrhoids amongst a sample of our multiracial population and individual preference for either modern or traditional medical treatment in the management of the condition.

## Materials and Methods

A pilot cross sectional study using a two-stage stratified sampling design with proportional allocation was performed on a sample of adult population in the state of Penang from March to June, 2004, using a structured pre-tested questionnaire produced in three languages (English, Malay and Chinese). Questions asked pertained to a history of haemorrhoids and type of intervention or treatment sought.

## Results

Out of 1227 respondents, information was available on 1118 (91.1%) individuals. The mean age of the respondents was 40 years, 41% of who were males. A background history of haemorrhoids was given by 105 (9.4%) individuals. A total of 89 (85%) subjects had treatment for their piles, 68 (76%) of who had medical intervention, the rest opting for traditional treatment. Malay subjects (35%) were more likely to seek traditional treatment in comparison to Chinese (13%) and Indians (9%).

## Conclusion

Even though the majority of respondents with a history of haemorrhoids had sought treatment for their condition, almost a quarter had opted for traditional treatment. The latter group of subjects together with those who did not seek medical attention accounted for 35% of individuals who were at a higher risk of harboring a more sinister lower gastrointestinal pathology in view of failure to have a thorough medical evaluation. Educating the public on the importance of thorough medical evaluation prior to choosing their preferred intervention for haemorrhoids is an important measure to reduce morbidity and mortality associated with delayed presentation of more serious colorectal pathology.

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# Stapled Haemorrhoidectomy in Malaysian Patients – A Prospective Evaluation

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## Summary

### Background

Stapled haemorrhoidectomy has been cited as a breakthrough procedure for the treatment of prolapsed piles especially pertaining to its potential in resulting in less postoperative pain in comparison to excisional haemorrhoidectomy. There has been no prior formal assessment of stapled haemorrhoidectomy in Malaysia and we decided to prospectively evaluate its short and medium-term outcome to confirm the benefits and safe application of this procedure.

### Materials and Methods

Forty-seven consecutive patients with circumferential piles underwent stapled haemorrhoidectomy under general or spinal anaesthesia. Criteria for selecting patients for the procedure included absence of skin tags or significant external haemorrhoidal components that circumvented reduction of the pile mass to enable effective stapling to be performed. All the patients received standardized postoperative analgesia and laxative regimens. A linear analogue pain chart (scores: low 0-3, moderate 4-6, severe >6) was used to assess postoperative pain scores. Assessment of pain and other symptomatology was continued immediately following discharge using telephone interviews and thereafter outpatient review in the colorectal clinic up to 8 months following surgery.

### Results

Of the 47 patients (age range 25 – 70 years), 36 (77%) had third degree haemorrhoids while 11 (23%) had fourth degree haemorrhoids. Postoperative pain score was graded as low by 37 (79%), moderate by 7 (15%) and severe by 3 (6%) patients respectively. Majority of the patients (72%) were discharged one day following surgery while 15% were discharged on the second postoperative day. Immediate postoperative complications recorded included urinary retention (8.5%), bleeding not requiring surgical intervention (4.2%) and severe pain (4.2%). All but one of the complications recorded occurred during performance of the first 20 cases. At a median follow-up period of 6 months, 1 patient (2.1%) developed a low fistula-in-ano while another patient had suboptimal results that required excisional haemorrhoidectomy.

### Conclusion

In our experience, stapled haemorrhoidectomy is a procedure associated with low or tolerable pain and minimal morbidity with acceptable short and medium term results. Patient selection and surgical experience are important factors that help avoid significant complications including the necessity for repeat surgical intervention.

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# Immunohistochemistry Detection of hMLH1, hMSH2, and hMSH6 Loss in Colorectal Cancer

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## Summary

As shown from the cancer registry statistic 2003, colorectal cancer is the third most common cancer among Malaysians. Inactivation of mismatch repair (MMR) protein is known to be one of the frequent events in colorectal carcinogenesis and this can be evaluated by immunohistochemistry (IHC) staining of MMR proteins in colorectal cancer cells. In this study, we analysed 68 cases for hMLH1, hMSH2, and hMSH6 proteins expressions and correlate the staining patterns with clinicopathological data. The majority of our cases were female (54.4%), Chinese (69.1%), tumour presenting in stage Duke's B (42.6%), left sided disease (60.3%), and with Grade 2 histomorphology (54.4%). Of all the cases stained for hMLH1, hMSH2, and hMSH6, 19.1% (13/68) had at least one MMR loss. There are variations in expression patterns of MMR proteins. Some cases showed uniformly positive staining, and others showed positive expression with variable (weak to strong) staining intensity, negative in cancer cells only, or negative in all (including normal) cells. MMR loss was significantly more common in mucinous tumours (3/5 vs 10/63,  $p=0.0446$ ). Although statistically not significant, we observed a higher frequency of MMR loss in right-sided than in the left-sided tumours (6/22 vs 6/41). Frequency of MMR loss did not vary significantly with age, sex, race, and staging of disease. These findings suggest that colorectal carcinogenesis evolved from the mutator pathway is a minor (~20%) mechanism of pathogenesis, and uniformly distributed in our multi-ethnic patient population.

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# Retrospective Review of Young Colorectal Cancers in Kelantan

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## Summary

### Introduction

Colorectal cancer (CRC) is predominantly a disease of the elderly population and is rarely seen in young patients. There have been an increasing number of young adults presenting with late CRC to our institution.

### Objective

The aim of this study is to determine the clinical and pathological characteristics of colorectal cancer in patients less than forty years of age in Kelantan.

### Materials and Methods

Patients less than 40 years old presenting with primary carcinoma of the colon and rectum to Hospital Universiti Sains Malaysia during 1998 to 2004 were reviewed. Data collected include presenting symptomatology, duration of symptoms, histopathology of tumour, site and stage of disease.

### Results

A total of 19 patients were analysed. Age ranges between 16 to 39 years old and mean age was 29 years. The main presenting symptoms are abdominal pain (89.5%), altered bowel habits (89.5%) and significant loss of weight (89.5%). Only 1 patient had a family history of CRC. The average delay between the onset of symptoms and treatment was 10 months. Twelve patients had their tumour located in the recto-sigmoid colon. Fifty percent of the lesions were staged Duke's C and Duke's D. Adenocarcinoma was still the main pathological diagnosis in our series.

### Conclusion

Due to the rarity of colorectal cancer in the young adults; physicians and health care personnel need to be aware and refer early for investigation by colonoscopy or bariuma enema to rule out the disease.

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# Role of Colonoscopy as a Diagnostic Tool in Symptomatic Patients Hospital Kuala Terengganu Gastroenterology Unit Experience

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## Summary

The role of colonoscopy in asymptomatic patients has been shown to be of benefit, however it is not feasible to all patients especially in the east coast of Malaysia e.g. Terengganu. At Hospital Kuala Terengganu we performed colonoscopy to determine the prevalence and locations of colonic neoplasms in symptomatic patients whose age range from 7 to 90 years.

## Results

721 patients were studied with 871 colonoscopic examination done, 92% underwent complete examination of the colon. The mean age of the patient was 52.5 years and 60% were male. On colonoscopic examination, 51.5% had normal finding. The others revealed 4.8% pedunculated polyps of benign adenoma, 2% had malignant stricture while 1.2% had solitary rectal ulcers suspected as pre malignant lesions however biopsy revealed as non specific colitis and inflammation. About nine percent had detectable colorectal cancer consist of tumour mass of at least T3 in size and majority of these lesions 86% were found in left side of the colon and rectum. No significant difference was noted in the incidence of colorectal cancer between male & female and between Malay and Chinese population. Per rectal bleeding (Odds ratio (OR) 1.6, 95% confident interval (CI) 0.7-1.9), anaemia (OR 1.5, 95%CI 0.5-4.5), abdominal mass (OR 1.7, 95% CI 0.7-5.7) and age above 40 (OR1.8 (95% CI 0.9-3.5) are among the important factors that may suggest underlying malignancy.

## Conclusion

A full colonoscopy in symptomatic patients has an important role in differentiating organic and functional bowel disorder. Patients with per rectal bleeding, anaemia, altered bowel habit and age above 40 should undergo full colonoscopic examination to determine malignant from non-malignant lesions and it is safe.

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# Safety of Current Conscious Sedation in Malaysian Adult Patients Undergoing Colonoscopy

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## Summary

### Introduction

Colonoscopy is increasingly performed in our adult population due to an increasing incidence of colonic disease, especially in the elderly. Conscious sedation is routinely administered, but the safety of this practice has not been studied in detail.

### Objectives

To examine the safety of the current regime of conscious sedation in patients undergoing colonoscopy and identify risk factors for cardio-respiratory complications.

### Materials and Methods

Consecutive adult outpatients undergoing colonoscopy were prospectively enrolled. All patients were given a combination of intravenous midazolam (2.5 to 5.0 mg) and pethidine (25 to 50 mg). Older patients and patients with lower body mass index (BMI) were given a lower starting dose. Continuous monitoring of oxygen saturation, blood pressure, and pulse rate were recorded. Age, BMI, duration of procedure, endoscopists' level of experience, total midazolam and total pethidine used were factors assessed in this study.

### Results

Between October 2004 to February 2005, 208 patients underwent colonoscopy for a variety of indications. The mean age was  $57.2 \pm 14.8$  years (range 16 - 85) with a sex ratio of 1.08 male: 1 female. The mean dose of midazolam and pethidine used were  $5.0 \pm 1.1$  mg and  $43.3 \pm 14.0$  mg respectively. Hypotension occurred in 6 (2.9%) patients and hypoxia occurred in 13 (6.25%) patients. Both of these were reversible and no hospital admissions were required. Multi-variate analysis revealed that age > 60 years was an independent risk factor for hypoxia ( $p=0.029$ ) and was strongly associated with hypotension ( $p=0.054$ ). 97 (46.6%) of patients undergoing colonoscopy were above the age of 60.

### Conclusion

The current practice of conscious sedation in Malaysian patients is relatively safe. However, an increasingly elderly population undergoing colonoscopy will require more caution and careful monitoring.

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# Conscious Sedation for Colonoscopy in Malaysian Patients Undergoing Colonoscopy - Still Room for Improvement

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## Summary

### Introduction

Colonoscopy is vital in the management of colonic disease. However, its' utility is dependent on patient tolerance to the procedure, which is known to vary between different populations.

### Objectives

To determine our local patient tolerance to colonoscopy using conscious sedation and to identify risk factors for poor tolerance.

### Materials and Methods

Consecutive adult outpatients undergoing colonoscopy were prospectively enrolled. All patients were administered a combination of intravenous midazolam and pethidine. Pre-procedural anxiety, demographic, and clinical data, including endoscopists' experience were recorded. After recovery, all patients recorded the amount of discomfort felt (5-point Likert scale) and their tolerance on a pre-defined 100mm visual analog score (VAS). Willingness to repeat the procedure in a similar manner was additionally noted.

### Results

Two hundred and eight patients (mean age  $57.2 \pm 14.8$  years, 44% female) underwent colonoscopy between September 2004 and February 2005. The mean doses of midazolam and pethidine used were  $5.0 \pm 1.1$  mg and  $43.3 \pm 14.0$  mg respectively. Bowel preparation was good in only 44.23 % of cases and caecal intubation was achieved in 183 (87.98%) cases. 145 (69.7%) of colonoscopies were performed by doctors with < 1 year experience with a mean duration of  $27.8 \pm 11.5$  minutes. Thirty patients (14.4%) had poor tolerance to colonoscopy. Female gender, IBS symptoms, difficult colonoscopy and long duration of procedure were significant factors for poor tolerance. Multivariate analysis revealed only female gender (OR 2.92, 95% CI=1.22 to 7.01) and duration longer than 30 minutes (OR 2.85, 95% CI=1.08 to 7.48) were independent predictors of poor tolerance. 50% of these patients were not willing to repeat the colonoscopy in a similar manner.

### Conclusion

A significant number of patients in this South East Asian population have poor tolerance to colonoscopy despite optimal conscious sedation. This has important implications for the management of colonic diseases in this country.

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# Clinical Profile of Ulcerative Colitis and Crohn's Disease Patients of Hospital Sultanah Aminah, Johor Bahru, Malaysia

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## Summary

### Introduction

This is a descriptive study providing the clinical profile of ulcerative colitis (UC) and Crohn's disease (CD) patients treated at HSA, JB.

### Materials and Methods

All patients with an established diagnosis of inflammatory bowel disease IBD cases who had been referred to gastroenterology (GI) unit of HSA from January 2004 to May 2005 were studied.

### Results

There were 21 IBD patients (6.2%) including 7 new cases out of total 335 patients referred. The anatomical extent of the disease were : 6 pancolitis UC, 6 left sided limited UC, 1 proctitis UC, 5 ileocolic CD, 2 colonic CD and 1 ileocolic plus duodenal CD with total of 13 UC and 8 CD patients. Age range was 14 to 69 years. Mean age of UC and CD was 43 and 32 years respectively. Male to female ration was 6.2: 3.8. Ethnic breakdown was 33% Chinese, 29% Indian, 29% Malay and 9% others. None of the patients had family history of IBD. The commonest symptom for UC was bloody diarrhoea (61%) and CD was lower abdominal pain (38%). Three CD and one UC patients had extra-gastrointestinal manifestations. Mean time lag between symptoms and clinic visit for UC was 26 months (Range 2 - 120 months) and CD was 15 months (Range 2 – 60 months). Remission was induced by steroid in 62% of UC patients and 100% in CD patients (one had infliximab). Remaining 28% of UC, remission was induced by 5-amino salisylate acid (5-ASA). Maintenance with 5-ASA alone was in 77% of UC cases and combination with azathioprine in another 23%. All CD patients were maintained with 5-ASA and azathioprine except one used 6-mercaptopurine. Five CD patients (63%) had surgery done. It was exploratory laparotomy with gut resection in 4 patients and one had surgery for duodenal stricture.

### Conclusion

IBD made up of 6.2% of total referral of HSA GI clinic in 17 months period. UC was more common. CD patients were younger. Relatively Indians were commoner in this cohort. Local IBD patient had delayed presentation about 15 to 26 months. CD needed more aggressive treatment with steroid induction and azathioprine maintenance. Moreover, surgery was common in CD i.e. 63% in this series.

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# Oxaliplatin in Metastatic Colorectal Carcinoma: NCI Cancer Hospital Experience

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## Summary

### Introduction

The standard of care over the last decade has considerably changed from the traditional reliance of 5FU/FA based chemotherapy in advance and metastatic colorectal cancers. This change has also resulted in better response rates (RR), longer time to progression (TTP) and survival rates (SR).

### Objective

To assess the safety, tolerability and survival rates in our population of patients.

### Materials and Methods

Patients with advance or metastatic colorectal carcinoma were recommended to receive Oxaliplatin Base chemotherapy. The regimen described as FOLFOX 4 consist of Oxaliplatin 85- 100mg/m<sup>2</sup> Day 1 with Folinic Acid 200mg/ m<sup>2</sup> Day 1 and 2 with Bolus 5FU 400mg/m<sup>2</sup> Day 1 and Day2 followed by 5FU 600mg/m<sup>2</sup> over 22hours Day 1 and 2 repeated every 2 weeks.

### Results

A total of 25 patients received FOLFOX4 for advance colorectal carcinoma between May 2000 May 2005. There was a male to female preponderance of 1.5 to 1.0 though there were more female patients seen at the institute for malignancies. The age ranged from 23 to 78 years with a mean age of 52.9 years and a median of 52 years. All patients had histologically proven adenocarcinoma of the colon. The stage at presentation were Stage B (6), Stage C (7) and Stage D (12) patients respectively. Six patients with Stage B and six patients with Stage C who have had adjuvant chemotherapy before presented with local recurrence or metastatic disease. The total number of cycles given ranged from 1 cycle (2 injections) to 6 cycles (12 injections) with a median of 3 and a mean of 3.8 cycles. The duration of therapy ranged from 4 weeks to 24 weeks with a median 12 weeks. Response rate was 36% (CR 16% and PR 20%) with stable disease in 36%. TTP was 7 months and median survival 22 months. The therapy was well tolerated by most patients but some had peripheral neuropathy with cumulative doses of oxaliplatin. Two patients had grade 3 neuro-toxicity of which one patient recovered fully after cessation of chemotherapy.

### Conclusion

Oxaliplatin was well tolerated in our patient group with minimal side effects. The response rates are comparable to published phase III studies.

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# Concurrent Chemoradiotherapy in Carcinoma of the Colon: NCI Cancer Hospital Experience

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## Summary

### Introduction

Concurrent chemoradiotherapy is the standard of care in patients with Colorectal Cancer Modified Asler Collier (MAC) Stage B2, B3 and above. The standard doses range from 45Gy// 25 # with intravenous chemotherapy given on Week 1 and Week 5 of therapy. Traditionally 5Flurouracil with Folinic Acid has been used. The addition of concurrent chemo-radiotherapy resulted in better time to progression (TTP) and survival rates (SR).

### Objective

To assess the safety, tolerability and survival rates in our population of patients.

### Materials and Methods

Patients with MAC B2, B3 and above were included. All patients would have a CT simulation and 3 field techniques were employed. Patients would be given intravenous chemotherapy on week 1 and 5 with iv Folinic Acid 20mg/ m2 Day 1 to 4 with 5FU 400mg/m2 Day 1 to 4. One month following the concurrent chemotherapy patients would be subjected to another 4 cycles of chemotherapy on a monthly interval to complete 6 months of therapy.

### Results

A total of 45 patients had the above therapy from 1st June 2000 to 31st July 2004. The male to female ratio was 2:1 and the age ranged from 33 years to 85 years with a mean of 57.7 years and a median of 58 years. The ethnic distribution was Chinese 55%, Malays 35% and Indians 10%. The stage was B (29%), C (58%) and D (13%). All patients had histologically proven adenocarcinoma of the colon. The grade was G1 (13%),G2(69%),G3(11%),GX(7%). The radiotherapy dosage ranged from 45Gy to 66Gy with a mean of 53.5 and a median of 54Gy. The number of fraction ranged from 25 to 35. The duration of therapy ranged from 5 to 9 weeks with a mean 6.2 weeks and a median of 6 weeks. Therapy was well tolerated with 3 patient having treatment interruption due to diarrhea and low blood counts. At the time of analysis 30 were alive and 15 dead. Follow up duration was from 1 to 116 months, mean is 20.3 months and the median 16 months.

### Conclusion

Concurrent chemo-radiotherapy was well tolerated in our patients.

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# Cetuximab in Metastatic Colorectal Carcinoma

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## Summary

### Introduction

For close to 50 years the standard of therapy for metastatic colorectal cancers (MCRC) has been 5-fluorouracil based chemotherapy. In the last decade Oxaliplatin and Irinotecan (CPT11) had a major impact in the median survival of patients with MCRC. In the last two decades with better understanding of growth factors and its contribution in tumorigenesis more agents are discovered that may have a use in combating this disease. One such agent is C 225 (Cetuximab) a chimeric monoclonal antibody directed against the extracellular binding domain of the epidermal growth factor receptor (EGFR). FDA approved addition of Cetuximab to Irinotecan intolerant or refractory disease in MCRC. We will describe our experience on 2 patients that received Cetuximab

### Case I

Middle age general practitioner presented with Dukes C disease at St Elsewhere on May 1999 following investigation for anemia. He had an anterior resection followed by concurrent chemo RT to the rectum. He remained well till January 2001 when he was noted on routine examination to have elevated CEA and lung metastasis. He received 6 cycles of FOLFOX 4 and was noted to have stable disease. He presented to us and remained symptomatically well with a rising CEA close to 12 months. The lung lesion got bigger and he was started on RT to the chest wall with oral UFT and FA. He remained well for another 6 months before he started losing weight. He was started on Irinotecan and after 2 cycles his symptoms got worse. He was started on combination of Cetuximab with Irinotecan. He had completed 6 cycles. His CEA normalized and was symptom free. He is well at this moment. He has completed 70 months since the diagnosis was first made and 52 months since he developed lung metastasis. Skin rashes were the main side effect and loss of appetite.

### Case II

Middle age engineer presented to the surgeons with lower abdominal pain on June 2002. He had Dukes D Carcinoma of the colon with liver metastasis. He received 3 cycles of FOLFOX 4 and he decided to stop therapy against advice. He remained well until 12 months later when he developed more lesions on the liver and paraaortic lymphadenopathy. He was started on oral Capecitabine. After 6 cycles he had progressive disease. He was refractory to Irinotecan /5FU/FA and was started on Erbitux with CPT 11. He responded well until his third cycle but developed 2 episodes of septicaemia from the UTI and his stent was removed. He deteriorated soon and passed away due to progressive disease and renal impairment.

### Conclusion

Cetuximab was well tolerated in both our patients with minimal side effects. It offers an option for patients with MCRC who are refractory to standard therapy.

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# NCI Cancer Hospital Registry: Colon Cancer Registry

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## Summary

### Introduction

Cancer epidemiology is an important aspect in cancer care and research. It was important as an Institute for us to establish a registry for the verification of our data and look at survival figures. We collected data right from the beginning of our center in 1999. Nilai Cancer Institute Cancer Registry (NCICR) registered its first patient in the month of May, 1999. The data base consisted of 4 main areas including registration data, clinical data, treatment data and death registry.

The registration data was the first phase of the registry and this was followed closely by the clinical data that went into various phases of development and changes with the latest HMIS Version 1.0 with Visual Basic as front end, SQL server as back end. The information that was captured included: Name, Identity IC number, race, religion, nationality, gender, address, phone numbers, diagnosis ,cancer I, cancer II, cancer III, TNM/UICC/AJCC staging, histology, grade, ECOG performance, Body mass index, Body surface area, family history of cancer, risk factors (smoking, alcohol consumption, betel nut chewing), dietary history and constitutional symptoms were recorded.

The next phase includes collection of treatment data as well as the death registration. The death registry data are compiled by a dedicated nurse who calls the patient from time to time to find out how they are fairing even if the patient was not on our current follow up.

### Results

A total of 1842 patients were registered until December 2004. A predominantly Chinese population with female preponderance was observed. The most common cancer was Breast Cancer followed by Head & Neck Cancers. The most common cause of death was lung cancer.

The data on the colorectal cancers were collected from this main data base. A total of 178 cases were colorectal cancers. Cancers of the colon and rectum was the second commonest cancer seen at NCI. It was the most common cancer among the males and third commonest cancer in females. There was a male preponderance with age ranged from 23 to 85 years with a mean of 56.5 years. Adenocarcinoma was the commonest histology type seen and the most commonest site was sigmoid followed by rectum, descending, ascending and caecum. The commonest stage was Modified Astler Coller Stage A 5%, Stage B 35%, Stage C 45% and Stage D 20%. Primary treatment was surgery in the majority of cases followed by concurrent chemo-radiotherapy for patients with recto-sigmoid carcinomas. MAC stage B2 and above received adjuvant chemotherapy for 6months. The popular regimens used were Folinic Acid with 5- 5 Flurouracil, oral Capecitabine, Oxaliplatin, Irinotecan and UFT with FA.

### Conclusion

Colorectal cancer was the second commonest cancer seen in our hospital. It was the commonest among males and third commonest in females. It is very important to develop a cancer registry with various database to explore the survival rates in every institution and hospitals concerned so that it can be used as a benchmark to compare with the rest of the world.

# Differential Gene Expression in Colorectal Cancer: Quantitative Analyses of Angiogenesis Genes and Identification of Potential Candidates as Molecular Markers

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## Summary

### Introduction

Colorectal cancer is currently one of the most common cancers in Malaysia. The progression of healthy colon tissues to cancer is due mainly to mutations in several genes and occurs in a step-wise manner. Microarray data analyses have revealed the diversity of gene expression within pathologically identical cancers as well as different types of cancers and provide investigators with potentially novel therapeutic targets and molecular markers for cancers.

### Aim

- To obtain a differential gene expression profile of colorectal cancer cells in a Malaysia population from microarray data.
- To validate results from microarray data analyses using real-time PCR on tissue specimens from a local hospital.
- To identify potential candidate genes as molecular markers for colorectal carcinoma.

### Materials and Methods

**Microarray Data Analysis :** Microarray data has led to the identification of several genes that displayed unique expression profiles in colorectal cancer. These results have been corroborated with real-time RT-PCR experiments.

**RNA Extraction :** Healthy and colorectal adenocarcinoma tissues were provided by the University Malaya Medical Centre (UMMC), Kuala Lumpur. Total RNA was extracted from 10 healthy and 10 colon adenocarcinoma tissues using the RNeasy RNA extraction kit from Qiagen.



Real-time PCR : The **LightCycler 2** system from **Roche Diagnostics** was used to perform real-time RT-PCR experiments with SYBR Green I as fluorescent dye. Primer sequences for genes of interest were obtained from PrimerBank database available online at Massachusetts General Hospital server.  $\beta$ -actin was selected as internal control.

## Results and Discussions

The expression of Cyr61, a potential angiogenesis factor, was found to decrease up to approximately 4.5-fold while another angiogenesis factor, VEGF, was inconclusive although several samples showed slight up-regulation. These results had hinted at the possibility of antagonistic VEGF-Cyr61 interaction. Microarray data analyses indicated an increased level of expression of the human lysozyme encoding gene, LYZ, and previous research using immunohistochemistry techniques have shown high levels of lysozyme exclusively in colorectal cancer tissues. This was substantiated using real-time RT-PCR where we found up to 440-fold increase in expression levels of LYZ in colorectal adenocarcinoma tissues making it a potential molecular marker for colorectal carcinoma. Microarray data analysis and real-time RT-PCR showed significant decrease in APOE gene expression suggesting its putative role in tumorigenesis of colorectal cancer associated with high fat-intake diet. The expression of ING4, a candidate tumor suppressor gene in brain cancers, was discovered to be suppressed in healthy colon tissues but slightly up-regulated in colon cancer tissues, inferring that ING4 may not play a tumor-suppressing role in the tumorigenesis of colorectal cancers.

## Conclusion

- The substantial relative increase in LYZ expression in all the colon carcinoma specimens studied suggests the possibility of utilizing LYZ as a potential molecular marker for colon cancer.
  - There is possibly an antagonistic interaction in the expression of the angiogenesis factors Cyr61 and VEGF in colon carcinomas.
  - APOE gene may play a role in the mechanism of tumorigenesis associated with high calorie-intake diet.
  - ING4 may not play a tumor suppressor role in colon carcinomas.
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# Determination and Detection of Epstein-Barr Virus in Lower Gastrointestinal Lymphomas: Study on Malaysian Patients

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## Summary

Non-Hodgkin's lymphoma (NHL) ranked twelve among all cancers world-wide. The aim of the present study was to determine the presence and distribution of Epstein-Barr virus (EBV), in formalin fixed paraffin embedded tissue samples obtained from twenty Malaysian patients diagnosed with lower gastrointestinal tract (GIT) lymphomas. The GI lymphomas tissue samples analysed in the present study for the presence of EBV were divided into the following: NHL of small intestine (7 cases), NHL of ileocecal (9 cases), NHL of abdominal (1 case), NHL of rectum fotic (1 case), NHL of wedge ulcer (1 case), and finally NHL of hemicolon (1 case). The presence of EBV nucleic acid (EBERs), in all of the above mentioned tissue samples were carried out by using conventional in situ hybridization technology.

Two out of 20 cases of NHL of GIT analysed in the present study, demonstrated positive signals for EBV/EBER. In the first positive case, EBV/EBER signals were located in transformed lymphocytes in serosa layer of small intestine (14.3%). In the second EBV positive case, EBV/EBER signals were located in diffuse B-cell lymphomas of ileocecal (11.1%).

In conclusion, these finding demonstrate a rare association between EBV and lower GIT lymphomas. The present study may also indicate that anti-herpesviruses drugs therapy may resulted in the rapid recovery of those 2 GIT lymphomas patients who shown to be positive for EBV/EBER in the present study. In order to confirm anti-herpesviruses therapeutic approach, similar studies to the present study on more GIT lymphomas tissue samples will be necessary.

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# A Community Based Study on the Prevalence of Lower Gastrointestinal Symptoms in Penang, Malaysia

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## Summary

### Background

The aim of this study was to determine the prevalence of colorectal symptomatology amongst our population and their attitude with respect to seeking medical opinion for symptoms that could underlie a potentially sinister pathology such as colorectal cancer.

### Materials and Methods

A cross sectional study using a two-stage stratified sampling design with proportional allocation was performed on a sample of adult population in the state of Penang from March to June, 2004, using a structured pre-tested questionnaire produced in three languages (English, Malay and Chinese). Questions asked pertained to the presence of present and past history of rectal bleeding, altered bowel habit of more than 4 weeks duration, performance of lower gastrointestinal endoscopy and whether or not patients had sought medical attention for any of the above symptoms. A theoretical question on their preference for alternative or modern medical treatment was also inquired.

### Results

Information was available on 1118 (91.1%) of the 1227 respondents (mean age: 40 years), 41% of who were males. A total of 171 (15%) respondents had suffered from rectal bleeding at some point, majority (57%) of who had symptoms of more than one-year duration. Of these, only 24 (14%) individuals had a lower gastrointestinal endoscopic evaluation performed. Alteration in bowel habit for more than four weeks was present in 44 (3.9%) respondents, of who only a mere 6 (13.6%) had an endoscopic procedure or radiological evaluation performed. Only 5% of respondents had sought medical attention for any of the above lower gastrointestinal symptoms. Majority (94%) of respondents claimed that they would prefer initial modern medical rather than traditional treatment or alternative medicine if they were to be diagnosed with colorectal cancer.

### Conclusions

A significant percentage of the population in this study did suffer from colorectal symptomatology of which only a minority sought medical opinion or had further investigations to elucidate the nature of the pathology. Educating the public and dispersion of medical information remains an important measure in the attempt to emphasize the seriousness of certain gastrointestinal symptoms to help reduce the morbidity and mortality associated with delayed presentation of patients who may harbor a colorectal neoplasm.

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# Perianal Mucinous Adenocarcinoma Arising from a Chronic Perianal Fistula

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## **Summary**

Perianal Mucinous Adenocarcinoma is a rare tumor which may be associated with Long-Standing Chronic Perianal Sepsis. Early diagnosis is challenging and is based on a high index of clinical suspicion and specific histological features. The tumor is naturally slow growing and has a protracted course. Definitive treatment is surgical, in the form of an abdomino-perineal resection. We hereby describe a case of a perianal mucinous adenocarcinoma arising from long-standing recurrent perianal sepsis and complement this with a brief review of the literature pertaining in particular to the management of this condition.

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# Bacterial Contamination Rate of Ready-To-Use Gastrointestinal Endoscopes in a Private Hospital Setting

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## Summary

### Background and Objective

Although the risk of disease transmission via contaminated gastrointestinal endoscopes is relatively small, the increasing number of diagnostic and screening examinations performed daily heightens this possibility. Contamination of the endoscope may occur if the cleaning and disinfecting have been deficient, or if the internal channels of the endoscope is damaged. Microbiological monitoring of endoscopes can be used as an indirect indicator of the adequacy of the cleaning and disinfection process. As part of an in-house quality assurance programme in clinical practice, a month-long microbiological testing for endoscope contamination was performed. Its aims were to quantify the contamination rate, and ultimately to guide the setting up of a practical and regular surveillance programme in endoscope reprocessing.

### Materials and Methods

All cleaned and disinfected gastroscopes and colonoscopes were sampled just before being used on patients. Sterile normal saline was flushed into each air-water, suction and biopsy channel. The total rinse fluid was collected in a sterile container. The collected sample was inoculated onto both blood agar and MacConkey agar and then incubated aerobically at 37°C for 48 hours. Semi-quantification of bacterial growth was performed in numbers of colony.

### Results

A total of 407 upper and lower endoscopic examinations were performed during the study period. The number of samples taken were 321, amounting to 79% of the total number of endoscopies performed. Two hundred and nine of the samples taken were from gastroscopes (65.11%) and 112 samples (34.89%) were from colonoscopes. Organisms were isolated in 17 of the 209 gastroscopie samples (8.13%). However, only 3 samples (1.44%) grew opportunistic pathogens; two *Pseudomonas* species and one fungal organism. The rest yielded Diphtheroids, an environmental bacteria. The colonoscope cultures were also positive in 17 samples (15.18%). Of these, 9 cultures (8.04%) grew *Pseudomonas* species. The rest were again Diphtheroids. The combined positive tests for both upper and lower endoscopes for possibly pathogenic organisms were 12 (3.74%).

### Conclusion

The small but not insignificant contamination rate confirms the existence of a possibility for transmission of opportunistic infection during endoscopy. It emphasizes the need for strict adherence to endoscope reprocessing protocol and the institution of a regular surveillance programme. The study also shows that a surveillance programme using microbiological testing is practical and feasible.

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# Gastrointestinal Tuberculosis: Characteristics, Outcomes and Comparisons to Pulmonary Tuberculosis

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## Summary

### Background

Tuberculosis remains one of the commonest infections. Gastrointestinal tuberculosis (GTB) poses a diagnostic challenge and is associated with significant morbidities and mortality if untreated or delay in initiating treatment.

### Materials and Methods

Patients with GTB (January 1995-May 2004) were identified and retrospectively reviewed. Comparisons were made with patients with pulmonary tuberculosis (PTB).

### Results

There were 34 patients (male: 21, mean age  $43.30 \pm 16.02$  years) with GTB. Eight patients had associated co-morbid conditions. Clinical symptoms were present on average 7.5 months (0 to 60) before presentations. The sites involved were: ileocolon-44.1%, peritoneum-29.4%, hepatic-17.6%, appendix-11.8%, biliary-5.9% and one patient had simultaneous esophageal, stomach and duodenal involvement. Four patients had involvement of multiple sites. The common clinical presentations were abdominal pain-61.8%, loss of appetite-44.1%, weight loss-55.9%, fever-39.4% and abdominal distension-29.4%. Ten (29.4%) patients had radiological changes consistent with PTB. Four patients had active PTB. GTB were diagnosed after surgeries in 8 patients. Overall, 47% had positive staining for acid fast bacilli. Patients with GTB had significantly lower hemoglobin ( $11.6 \pm 2.4$  g/dL vs.  $12.6 \pm 2.0$  g/dL,  $P=0.036$ ) and hematocrit ( $32.5 \pm 5.0\%$  vs.  $37.5 \pm 5.6\%$ ,  $P=0.029$ ) level compared to patients with PTB. Adverse events occurred significantly more in GTB (50% vs.15%,  $P<0.001$ ), however most were self-limiting. Hepatotoxicity occurred in 6 patients and two were significant. There were no differences in treatment response ( $P=0.454$ ). All patients are alive on follow-up.

### Conclusion

GTB presents with a wide spectrum of involvement and there are little differences compared to patients with PTB. GTB should always be considered as treatments are effective.

**Key Words:** Clinical presentations, Gastrointestinal tuberculosis and Outcomes

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# Management of Iron Deficiency in Patients Admitted to Hospital: Time for a Rethink of Treatment Principles

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## Summary

### Background

Iron deficiency (ID) is a common problem in patients admitted to hospital. Published guidelines and the actual practice of correcting iron deficiency often differ. New understanding about iron absorption and anaemia of chronic disease, and evidence regarding safety and superior efficacy of intravenous iron indicate treatment principles require reexamination.

### Objective

To develop guidelines for the correction of ID in patients admitted to hospital and to compare these with current practice in a general hospital.

### Materials and Methods

On the basis of current published evidence, guidelines were developed to manage patients admitted to hospital where ID was detected. All such patients admitted from Jan 2002 to June 2004 to a single general hospital were studied. ID was defined as 'unequivocal' (serum ferritin <20µg/L) or 'equivocal' (ferritin 20-100; transferrin saturation <20%). Data on the clinical setting and management were retrieved from casenotes. Their management was then compared with that of the guidelines developed.

### Results

Three clinical scenarios were identified: (A) *Urgent attention to haemoglobin required* - blood transfusion followed by intravenous iron recommended; (B) *Semi-urgent iron repletion*, where ID is of immediate relevance to the disease process and its correction is likely to improve the clinical situation – intravenous iron recommended; (C) *non-urgent iron repletion*, where ID is an incidental finding of no immediate concern – oral or intravenous repletion recommended according to individual situation. One hundred and nineteen patients were identified with ID (69 unequivocal). They were aged 18-99 (median 77) years, 29% were men, and haemoglobin was 33-130 (87) g/l. Of 66 (55%) given blood transfusion, 17 had subsequent intravenous iron, 25 oral iron, and 24 (36%) no other form of iron repletion. Of the other 53, 9 had intravenous iron, 32 oral iron and 12 (23%) had no treatment. 55% of patients were managed according to the proposed guidelines, and this occurred less frequently (9%) in those presenting with cardiovascular problems than those with anaemia (75%), GIT bleeding (90%) or other medical problems (60%) (all P<0.0001, Fisher's exact test). Results were similar in patients with equivocal and unequivocal ID.

### Conclusion

The current management of ID in patients admitted to hospital is haphazard, with underutilization of intravenous iron and failure to initiate any regimen for iron repletion being common. It is time for a change in approaches taken to replete iron in ill patients.

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# Gastrointestinal Stromal Tumors (GIST) in a Patient with Neurofibromatosis: A Case Report

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## Summary

Type 1 Neurofibromatosis (von Recklinghausen's disease) has been associated with several gastrointestinal tumor complications, either benign or malignant. The neurofibromatosis is an autosomal dominant disorder which has two different clinical entities: Type 1 or also known as von Recklinghausen's neurofibromatosis (vRN) and Type 2. The vRN is now recognized as a disease which affects multiple organ systems and has tendency to development of specific tumors such as optic nerve glioma and phaeochromocytoma. Twenty five percent of patients with neurofibromatosis have gastrointestinal pathology which is either benign or malignant. We report a case of a middle age man who was diagnosed to have Type 1 Neurofibromatosis since the age of 18 and presented with acute intestinal obstruction. Laparotomy revealed multiple nodular lesions along small intestine with two larger nodules which were resected. Histopathological examination of the nodules confirmed them as gastrointestinal stromal tumors (GIST) with malignant potential. The literature on this condition is reviewed.

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# Phytobezoars in Intestinal Obstruction: 2 Case Reports

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## **Summary**

Bezoars are retained concretions of food or foreign material in the alimentary tract. It can be further classified according to its major component such as trichobezoar (hair), phytobezoar (plant material) and others. Phytobezoars are more common and usually related to previous gastric surgery whereas trichobezoars are less frequent and associated with mental retardation and psychiatric patients. Previous gastric surgery such as partial gastrectomy or vagotomy has been linked with higher incidence of bezoar formation due to alter gastric physiology with impaired gastric emptying and reduced acid production. Poor mastication and ingestion of indigestible solids may contribute to the genesis of phytobezoars. We would like to report and share our literature review on our recent experience with two cases of phytobezoars related to previous gastric surgery.

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# Demographics of Gastrointestinal Lymphomas – The Kuala Lumpur Hospital Experience

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## Summary

### Aim

A preliminary demographic analysis of patients presenting with gastrointestinal lymphomas in a multiethnic population who were referred to a tertiary centre in Kuala Lumpur.

### Materials and Methods

A retrospective study comprising all patients who were referred to the gastroenterology and haematology divisions in the Kuala Lumpur Hospital. The study period comprised 50 months from 1st January 2001 to 28th February 2005.

### Results

There were 41 patients comprising 28 males (68.3%) and 13 females (21.7%) with a mean age of 50 years (range 18-75) and average duration of follow up of  $12 \pm 12.1$  months. Twenty-two (53.7%) patients were Malays, 12 (29.3%) Chinese, 3 (7.3%) Indians, 3 (7.3%) indigenous people and 1 (2.4%) Indonesian. Seventeen patients (41%) had predominantly gastric involvement, while 12 each had small bowel disease and colorectal disease. Fourteen (43.1%), 8(19.5%), 2 (4.9%) and 17 (41.5%) patients were in Ann Arbor stages IE, IIE, IIIE and IV respectively. Fourteen (34.1%) had type B symptoms while 20 (48.8%) had elevated serum lactate dehydrogenase levels. Twenty-one (51.2%) patients also had associated lymph node involvement. Histological findings were classified according to WHO classification. Predominant histology was Diffuse Large B cell variety (24 patients-58.5%), followed by Marginal Zone, Mucosa Associated (7), Lymphoplasmacytic (2), Enteropathic T cell (1), Follicular (1) and indeterminate B cell lymphoma in 6 patients. Survival rates were higher in patients under 40 years (75% alive at end of study) and above 61 years (72%) as compared to patients in between 41 and 60 years (55%). Out of the 14 patients who expired, 10 (71%) had elevated serum lactate dehydrogenase (LDH) levels while 17 of the 27 (63%) surviving patients had serum LDH levels in the normal range. At the end of the study period, 13 gastric lymphoma patients (76%), 9 small bowel lymphoma patients (75%) and 5 colorectal lymphoma patients (42%) were alive. Eighteen out of 22 patients (82%) in stages IE and IIE were alive at the end of the study period as opposed to only 10 out of 19 (53%) in stages IIIE and IV. The median duration of overall survival from the time of diagnosis was 10 months (SD=12 months).

### Conclusion

Diffuse large B cell lymphoma was the most common lymphoma affecting the gastrointestinal tract in our series. Patients with colorectal involvement and elevated serum LDH levels appear to have a poorer outcome.

# Early Clinical Experience of Functional Bowel Syndrome in a State Referral Hospital

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## Summary

### Introduction

This study aims to provide the clinical experience of irritable bowel syndrome (IBS) and non-ulcer dyspepsia (NUD) at HSA, JB.

### Materials and Methods

The studied patients were diagnosed to have IBS or NUD that had been referred to gastroenterology (GI) unit of HSA from January 2004 to May 2005. Epidemiological and clinical data of disease were collected from case records and patient interviews.

### Results

Of total 335 patients were referred during the study period, there were 47 (14%) patients with function problem. Majority were referred from surgeons (55%) and general practitioners (GP) (14%). Diagnosis was established at referral in 38% of cases but 70% had endoscopies done. Mean age was 40 years (range of 13 – 72). Female to male ratio was 11: 9. There was 43% Malays, 35% Chinese and 21% Indian patients. The three common symptoms were upper abdominal pain/ bloatedness (42%), lower abdominal pain (28%) and constipation (21%). Mean duration of symptoms prior to specialist consultation was 60 months (range 2 -480). Ten percent of patients were seeing psychiatrist, 21% of patients had chronic medical illness and 4% had positive family history. Mean numbers of upper endoscopy (OGD) and colonoscopy was 1.69 and 1.57 (both range 1 to 4). Diagnosis breakdown was 40% NUD, 28% IBS-pain predominant, 23% IBS-constipation predominant and 9% IBS–diarrhoea predominant. Besides counseling by gastroenterologist, three common prescribed drugs were: on-demand mebeverine (21%), regular amitryptilline (19%) and regular ranitidine (19%). At mean follow up of 8.7 (2 to 16) months, symptomatic improvement of at least 50% by direct questioning was noted in 77% of patients.

### Conclusion

Functional bowel syndrome made up 14% of GI clinic referral of HSA. Majority of patients were referred from surgeons and GP. Most patients had repeated scopes and 70% had endoscopies done before referral. NUD consisted of 40% and varies IBS cases made up of another 60% in this cohort. This clinical experience showed minimum medications with specialist management achieved significant positive outcome at mean follow up of 8.6 months.

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# Imatinib (Glivec) in Gastrointestinal Stromal Tumor: Nilai Cancer Institute Experience

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## Summary

### Introduction

Gastrointestinal stromal tumor (GIST) is a rarely occurring mesenchymal neoplasm of the GI tract that is caused by mutation of the c-kit tyrosine kinase receptor. This receptor is kept constantly activated, which results in unremitting proliferation of the stromal malignant cells. Over the recent years with the advent of Glivec, GIST tumors have garnered much attention. Imatinib selectively inhibits the tyrosine kinase activity of c-kit and platelet derived growth factor receptor alpha (PDGFR)

### Objective

To assess safety, tolerability and response rates in our patients.

### Results

A total of 5 patients were seen from January 2003 till March 2005. Three male and two female between the ages of 33 and 69 years. All five patients had malignant GIST confirmed by histology and presence of CD 117 on immunohistochemistry. The primary lesion was from duodenum (2), jejunum (2) and ovary (1). All 5 patients presented with abdominal pain. Primary therapy was surgery. Two patients were diagnosed to have malignant GIST 9 months and 15 months respectively post primary diagnosis. Two patients received palliative radiotherapy as they had bleeding.

Glivec was started on all 5 patients once the diagnosis was confirmed. Duration of treatment with Glivec ranged from 2 to 24 months. During the therapy none of the 5 patients had indigestion nausea, oedema, rashes or myelosuppression. At the time of analysis 3 patients were still alive. Duration of follow up ranged from 8 to 40 months with a mean of 18.6 months. Duration on Glivec ranged from 2 to 40 months with a mean of 14 months. All 5 patients reported clinical well being at month 1 of starting Glivec. Imaging studies were carried out on 4 patients at month 2 and it revealed stable disease. Three patients who are still on Glivec are in stable disease. Two patients had passed away, one due to renal impairment due to progressive disease and the other patient developed sudden onset of GIT bleeding on the 10th month on Glivec.

### Conclusion

Glivec was well tolerated and is an option that can be employed to treat malignant GIST in our population.

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# Why Am I So Unlucky? Carcinoma of the Esophagus and Carcinoma of the Colon

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## Summary

### Introduction

The occurrence of a second malignancy is not uncommon. There is no statistics as far as Malaysia is concerned about the incidence of a second malignancy. The NCI Cancer Hospital Registry reported 13 in 1000 patients have developed a second malignancy Med J Malaysia Vol 58 Supplement E September 2003. We would like to report the only case of Carcinoma of the Oesophagus developing a second different cancer arising from the colon.

Eighty-eight year old Chinese male presented with progressive difficulty in swallowing. Investigation including and endoscopy biopsy revealed a mid esophageal tumour T2N1M0. Histopathology revealed squamous cell carcinoma. Patient was treated with conformal radiotherapy 55Gy//25#. He remained well for 20 months when he presented on routine examination to have iron deficiency anaemia. Surveillance endoscopy was normal. Fecal occult blood testing was positive. He underwent a colonoscopy and a tumor was noted at the sigmoid colon. Biopsy revealed well-differentiated adenocarcinoma of the sigmoid colon. He had a left hemicolectomy and pathologically he was Dukes A, as such he was not given any therapy. He presented back to us 15 months later with metastasis lung disease. He did not have a histological confirmation but his CEA was elevated. In view of his age and performances status he was started on oral capecitabine. He had 6 cycles of oral capecitabine. He developed progressive difficulty in swallowing and endoscopy confirmed local recurrence at the site. Patient passed away 2 months later.

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# Appendiceal Mass: Local Review of Various Treatment Modality

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## Summary

### Objective

To review outcome of various treatment modality for the management of the appendiceal mass in Hospital Selayang from January 1999 to March 2005.

### Materials and Methods

All patients with an appendiceal mass confirmed radiologically or intraoperatively from January 1999 to March 2005 were selected. They were categorized into 3 groups. Group I: those who had appendectomy on admission; Group II: initial conservative management with interval appendectomy; Group III: only conservative management. Short term outcome measures that were studied included operative time, postoperative complications, complications arising from conservative management, duration of hospital stay and duration of antibiotic usage. Patient compliance to follow-up and outcome was also noted.

The short term postoperative complications were defined as fever, ileus, wound breakdown and intraabdominal abscess. Complications arising from conservative treatment were defined as worsening symptoms and or development of peritonitis which subsequently required surgery or other intensive care.

### Result

During the study period, total of 23 patients were identified (n=23, M=12, F=11). Group I consists of 11 patients, Group II had 1 patient and Group III had 11 patients. Among the short term parameters that were studied, the significant findings were that of presence of ileus (18%) and prolong fever (1%) in group I which was not present in other groups. The duration of antibiotic administration which was approximately 5 to 7 days and duration of hospital stay of about a week were almost similar in all study groups and found statistically not significant ( $p>0.05$ ). The mean operating time was found to be 123 minutes. There was a case of right hemicolectomy performed for unhealthy caecum in group I and III respectively.

There were high rate of non compliance for follow up in group I (73%) and 3 (64%). However, in group I all the patients were well and discharge on their very first follow up where else in group III, the patients were discharge well after 4 months with serial ultrasounds.

## **Discussion**

Appendiceal mass is a rare presentation nowadays due to better access to medical care and increase health awareness among the public. With the advent of the antibiotic therapy there is an increasing trend in treating appendiceal mass conservatively. We in Hospital Selayang aimed to look at the benefit of this popular trend against traditional appendectomy.

A total of 23 patients were studied. There was only 1 patient out of 23 of them who had an interval appendectomy performed. Therefore we were unable to study this group. Group I and group III had similar number of patients with almost similar demographic background therefore comparison were made between these groups though the number is small. The short term morbidity was found to be higher in those who had surgical intervention. Apart from this patients had to bear the scar of an appendectomy wound, there were no significant difference in the duration of the antibiotic administration, duration of hospital stay and long term outcome. There were no patients in the conservative group who developed recurrent appendicitis, adhesion colic or even intestinal obstruction. There was however a single case in the conservative group that required surgery on the third day of conservative management due to worsening of symptoms.

## **Conclusion**

From this study, conservative management appears to have better short term and long term outcome; as also been published by other international journals. However, patients who are treated conservatively should have regular clinical examination to look for worsening of symptoms. A larger study would definitely yield better conclusion.

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# An Innovative New Therapeutic Utility of the Argon Plasma Coagulator (APC)

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## Summary

### Background

Hereditary Hemorrhagic Telangiectasia (HHT) or sometimes known as Osler Weber Rendu Syndrome is an autosomal dominant condition with high penetrance. It has an equal sex distribution and occurs in 1 in 25000 individuals. Patients usually present in childhood or early adulthood with epistaxis. Approximately 25% have gastrointestinal (GI) manifestations, 15% pulmonary and 4% intracranial bleeding. APC has come to the fore for treatment of telangiectasias in the GI tract and is usually highly effective. We report further use of this exciting device for telangiectasias in the nasal septum and turbinates.

### Case presentation

A 60 year old patient presented to us with recurrent episodes of profuse continuous epistaxis and anaemia. He required numerous blood transfusions almost weekly. He had undergone an upper endoscopy examination earlier for malena and was found to have a telangiectatic lesion at 38cm from the incisors for which APC was applied successfully. An ENT examination revealed more telangiectatic lesions in the nasal cavity which were bleeding profusely and failed the multiple standard ENT treatment modalities. After adequate nasal Cocaine packing, we applied the APC to these lesions over four sessions every fortnightly with excellent results using the ultraslim Olympus scope and the end hole catheter at the normal GI setting. At the last session the telangiectasias were almost totally obliterated and he had been transfusion free for one month. Interestingly the patient had a coil inserted for a pulmonary Arterio-Venous Malformation eight years back.

### Conclusion

There has been no reported cases in the literature so far of APC being used for telangiectatic lesions in the nasal cavity. We report the first such case using this modality with a highly successful outcome.

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# Another Patient for the Magic Bullet?

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## Summary

### Introduction

Gastrointestinal Stromal Tumours (GIST)s are the most common mesenchymal tumours of the GI tract. It accounts for 1% of primary GI cancers. The stomach is most commonly involved (60-70%) followed by the small intestines (20-30%). It can metastasize to the liver and spleen but there has rarely been reported cases of metastases to the cerebrum.

### Case presentation

We report 88 year old lady who presented with epigastric discomfort for 6 months. Gastroscopy revealed a mass arising from the greater curvature in the upper corpus measuring 3.5cm x 4.0cm. An Endoscopic Ultrasound showed the mass arising from the muscularis propia. Histopathology revealed spindle shaped epitheloid cells arranged in vague bundles with CD 117(KIT) expression. The patient was planned for elective surgery. Unfortunately she presented with massive upper GI bleeding the following week. She subsequently underwent emergency gastrotomy and mucosectomy. She developed left sided hemiplegia post operatively. An MRI of the brain revealed a mass in the parietal region measuring 37mm x 28mm x 35mm. She was commenced on Imatinib Mesylate (IM), an orally administered competitive inhibitor of tyrosine kinase. She miraculously regained total function of her limbs within 2 weeks. An MRI of the brain done a month after commencement of treatment showed 31.7% regression of the tumour mass (33mm x 25mm x 30 mm.)

### Conclusion

Though it is not known whether Imatinib crosses the blood brain barrier, advanced GIST with metastases to the cerebrum treated with Imatinib in this patient showed a favourable response. It is hoped that more studies will be done in future to further define the utility of Imatinib in patients with GIST and metastases to the cerebrum.

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# Malignant Gastrointestinal Stromal Tumour - Experience with Imatinib Mesylate in Kuala Lumpur General Hospital

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## Summary

### Introduction

Imatinib Mesylate (Imatinib) is an orally administered competitive inhibitor of tyrosine kinase associated with the KIT protein which is abnormally expressed in Gastrointestinal Stromal Tumors(GIST). In Malaysia, Imatinib became available for treatment of GISTs in 2002.

### Materials and Methods

We reviewed records of patients with metastatic GISTs who were treated with Imatinib at our center.

### Results

A total of 9 patients with average age was  $52.5 \pm 16.2$  (range:26-78) comprising 3 males (33.3%) and 6 females(66.7%) with a racial breakdown of 7 Malays (77.7%) and 2 Chinese (22.3%) had histologically proven GIST with CD117 positivity. Six patients presented with an abdominal mass, 2 had right hypochondrial pain and 1 experienced per rectal bleeding. The duration of symptoms at presentation was  $18.9 \pm 11.2$  weeks (range:0.2-52). Majority of patients had small bowel tumors (6 patients) with 7 patients having metastases to the liver, 2 to the lungs and one each to the spleen and abdominal lymph nodes. Eight patients had curative surgery before tumor recurrence prior to treatment with Imatinib while 1 patient had an unresectable tumor with metastases to the liver, spleen and lymph nodes. Imatinib was titrated to 200mg bd. The average duration of treatment was  $10 \pm 8$  months (range2-35). Three patients showed partial response with more than 50% shrinkage of tumour mass. One patient needed dose reduction to 200mg od due to ankle edema. Three patients had temporary cessation of treatment due to intractable vomiting, refractory ascites and severe jaundice with raising alanine transaminase respectively. One patient passed away after 4 months of treatment and another 2 had just begun treatment with promising early results.

### Conclusion

Advanced GIST has favourable response to Imatinib in our center. With gradual widespread availability and awareness of this "magic bullet" we expect to see more patients being treated.

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# Renal Cell Carcinoma with Metastases to the Duodenum

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## Summary

### Introduction

Metastases to the gut can occur from direct invasion from adjacent tumours, by intraperitoneal seeding, or by hematogenous /lymphatic spread. It can lead to ulcerated mucosal lesions, obstruction or polypoidal masses that may result in intussusception. Renal cell carcinoma generally known to metastasizes widely.

### Case presentation

The first patient had advanced renal cell carcinoma with invasion into the inferior vena cava and pancreas and metastases to the lungs and liver. He presented with malena and severe anemia. An emergency upper endoscopy examination revealed a deep ulcer in the second part of the duodenum measuring 2 x 2 cm with raised, rolled up edges. Biopsies showed duodenal tissue nucleoli infiltrated by clusters of malignant epithelial cells in the submucosal region. The cells were large with hyperchromatic pleomorphic nuclei and abnormal mitosis compatible with metastatic carcinoma. The second patient presented almost similarly with advanced renal cell carcinoma with inferior vena cava thrombus, liver and lymph node metastases. He developed an upper GI bleed while being staged for his disease and an emergency upper endoscopy revealed an irregular mass measuring 2 x 2 cm which was hard and indurated arising from the third part of the duodenum. Biopsies revealed features in keeping with metastatic carcinoma.

### Conclusion

A review of the literature reveals renal cell carcinoma, also known as hypernephroma and Grawitz's tumour, has been called the internist's tumour because of the variable signs and symptoms. It has a diverse natural history which includes metastases to the lung, bone, liver adrenal glands and brain and rarely pancreas, parotids, prostate and even urethra. We describe two patients with renal cell carcinoma with metastasis to the duodenum leading to an upper gastrointestinal bleeding.

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# Inflammatory Bowel Disease in Hospital Kuala Lumpur

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## Summary

Inflammatory Bowel Disease (IBD) is said to be rare in this part of the world. Here we reported 42 patients with IBD, 33 ulcerative colitis (UC) and 9 crohn's disease (CD), who were seen at Gastroenterology Unit Hospital Kuala Lumpur. The peak cases in UC were in the third and fourth decades (60.7%) and in third decade (55.6%) in patients with CD. The mean (range) age of onset in our IBD patients was 36.8 year (10-68 year). The ratio of CD to UC has reduced to 1:3.6 from 1:7 previously reported by Kudva and Mazlam (1989) but similar reported by Rosaida and Mazlam (1:3.3) in 1998. The number of cases diagnosed as CD has increased over the past 16 year.

In term of ethnic distribution of IBD patients, 14 were Malays, 8 were Chinese and 20 were Indians, making it relatively common amongst Indians when compared to their population in Kuala Lumpur and their numbers in hospital admission. In UC, the disease occurs in 12 Malays, 4 Chinese and 17 Indians. In CD, the disease occurs in 2 Malays, 4 Chinese and 3 Indians. Family history was present in 1 Indian patient with UC.

At the onset of presentations, 19 (57.6%) of UC patients had abdominal pain, 30 (90.9%) had diarrhoea, 29 (87.9%) had per rectal bleed and only 1 (3.0%) had intestinal obstruction. In CD, 6 (66.7%) patients had abdominal pain, 6 (66.7%) had diarrhoea, 3 (33.3%) had per rectal bleed and 1 (11.1%) had intestinal obstruction. Fistulas occurred in 4 (44.4%) of patients with CD.

In our UC patients, 10 (30.3%) had pancolitis and 13 (39.3%) had distal colitis. In CD, 8 (88.9%) patients had involvement of the colon only and only one (11.1%) had involvement of the small bowel. Extra-intestinal manifestations were common in Malaysian patients with IBD and were observed in 12 (28.6%) patients with IBD. Nine (27.2%) in UC patients and 3 (33.3%) in CD patients had extra-intestinal manifestations. Arthralgia, backache, oral ulcers and anemia occurred in 10 (23.8%), 6 (14.3%), 5 (11.9%) and 1 (2.4%) IBD patients respectively. None of the patients had extra-intestinal manifestations of scleritis, skin lesion and primary sclerosing cholangitis. None of the patients had complication of malignant transformation particularly colonic cancer.

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# A Case Series on Adult Intussuception

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## Summary

### Introduction

While intussuception is relatively common in children, it's a rare entity in adults, where the condition is almost always secondary to a definable lesion. We report here a case series of intussuception in our patients with variable presentation and differing pathology.

### Results

A total of 5 adult patients with intussuception were evaluated in this series. The average age of the patients was 55.4 years with a range of 25 to 77 years. Four of the patients were males and one was a female. In terms of racial distribution four were Malays and one patient was Chinese. The majority of patients (four) had non specific symptoms and signs of bowel obstruction. One patient complained of having blackcurrent like stools. One patient complained of only having intermittent abdominal pain for almost 2 years before the diagnosis of intussuception was made. Two patients had presented relatively acutely within 24 to 48 hours of onset and the other three had symptoms ranging from 1 month to 2 years. Three of the patients also complained of significant weight loss. Diagnosis of intussuception was made on colonoscopies for three patients and on CT Scan of the abdomen for two patients which showed a classical "bull's eye" lesion. Four of the patients had a ileocaecal intussuception while one had a duodenojejunal intussuception and this patient had an associated malrotation of the gut. All our patients had variable leading causes for intussuception and they include lipoma, pseudopolyp, caecal carcinoma and Non Hodgkin's Lymphoma of the gut. Three of the patients underwent a right hemicolectomy and one had an open reduction of the intussuception with removal of the lipoma. All the patients who underwent surgery recovered well except for one patient who had Non Hodgkin's lymphoma. He presented with recurrent symptoms of bowel obstruction within two weeks of discharge.

### Conclusion

Adult intussuception is uncommon and is a frequently missed entity. It requires a high index of suspicion to make the diagnosis. The majority of adult patients with intussuception has a leading point as shown in our series.

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# The Use of a Disposable 3 Litre Saline Bag in the Closure of a Midline Laparotomy

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## **Summary**

A midline laparotomy is a commonly performed procedure in any surgical unit. Its indications may vary but technique of opening and closing the abdomen are not many. Closing the abdomen remains a challenging step especially in the hands of a junior assistant. The problem is retraction of the intraperitoneal structures and in most centres this is achieved by either placing a large abdominal pack or sometimes even the hand of the naive houseofficer! We have found a better, safer, faster and more cost effective method of closing a midline laparotomy using a 3 litre plastic saline bag which would have otherwise been disposed. We have ensured sterility by autoclaving this plastic and have found the retraction it offers far superior to other means known to us and thus we use it extensively. All this for free! USS abdo and CT scan are inconclusive.

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# Recurrent Acute Pancreatitis in a Young Patient

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## Summary

### Background

A 28 year old gentleman presented to our A&E department with a history of severe epigastric pain for 2 days duration. He gave a recent history of 2 admissions to a local general hospital with a similar complaint where he was diagnosed to have acute pancreatitis. There was no history of alcohol consumption and he was not on any regular prescription or traditional medication.

Clinical examination was unremarkable except for mild tenderness in his epigastric region.

Laboratory results :

Normal LFTS.

Serum Amylase : 1600

Calcium : 2.18 mmol/L

Fasting lipids : Total Chol – 5.1mmol/L; LDL – 2.4mmol/L; TG – 1.1mmol/L

IgG – normal range

Anti Nuclear antibody – negative

He showed good clinical recovery over the next 3 days. CT abdomen revealed a cystic lesion in the region of the head of pancreas. No mass lesion was noted.

Endoscopic Ultrasound(EUS) was performed subsequently. The pancreatic duct(PD) was grossly dilated with papillary projections within the duct in the region of the head of pancreas.

Endoscopic Retrograde Cholangiopancreatography (ERCP) was performed after the EUS examination. On direct endoscopic vision, the ampulla appeared patulous and there was mucin extruding.

ERCP revealed a cystic dilatation of the main PD. Cytology brushings were taken.

The patient was diagnosed to have an Intraductal Papillary Mucinous tumour (IPMT). He was referred to the hepatobiliary surgical team and underwent a Whipple's resection the next day. Histology of the tumour was consistent with IPMT

## Discussion

IPMT's are cystic tumours of the pancreas. They are characterized by intraductal dysplastic epithelium with papillae covered by columnar epithelium. They are considered to be premalignant lesions<sup>1</sup>. The natural progression of these lesions to cancer is not well recognized. IPMN's generally occur in men who are in their mid 60's. They principally occur in the head of pancreas but may be confined to a side branch<sup>2</sup>. Recurrent acute pancreatitis is a typical presentation. Absence of symptoms is not a predictor of benign disease. The presence of jaundice and diabetes are predictors of advanced disease. Long term data have shown that in patients who underwent surgical resection, the absence of invasive carcinoma is a very good predictor. 5 year survival rates of 100% have been reported in this group of patients. In patients with invasive carcinoma, 5 year survival is about 60%<sup>3</sup>

Our patient had an unusual presentation in that he was young. As the natural history of progression of disease from benign to malignant is not known, surgery is generally recommended for all patients IPMN. No diagnostic modality can accurately predict the presence of invasive carcinoma. Patients with non invasive carcinoma have an excellent prognosis.

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## References

1. Scheiman J. Cystic lesions of the Pancreas. *Gastroenterology* 2005;128:463-69
2. Brugge WR, Lewandrowski K et al. Diagnosis of pancreatic cystic neoplasms. A report of the Cooperative Pancreatic Cyst Study. *Gastroenterology* 2004;126:1330-36
3. Salvia R, Fernandez-del Castillo, Bassi C et al. Main duct intraductal papillary mucinous neoplasm of the pancreas. Clinical predictors of malignancy and long term survival following resection. *Ann Surg* 2004;239(5),678-85



# A Peutz - Jeghers Syndrome Case with Iron Deficiency Anaemia and Small Bowel Intussusception

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## **Summary**

Peutz-Jeghers syndrome (PJS) is an autosomal dominant inherited syndrome characterized by mucocutaneous pigmentations, with intestinal and extraintestinal polyps. It is a precancerous syndrome. The polyps can cause anaemia, intestinal obstruction and intussusception. We present a case who first presented to us with anaemia and history of intussusception two years ago. Subsequent Small Bowel Enteroscopy revealed multiple polyps located in the jejunum which was removed by snare polypectomy. She also had multiple pigmentations on the lips. Histopathological examination of the polyps showed hamartomatous change consistent with this syndrome. Finally, we present some surveillance recommendations for people with PJS and for those at risk for PJS. This case also illustrated the advantage of using Double Balloon Enteroscopy Method which allowed us to examine to the ileum for polyps surveillance.

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# The Impact of Endoscopic Ultrasound Fine Needle Aspiration (EUS FNA) on Decision Making

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## Summary

### Background

EUS allows access to pancreatic lesion, coeliac nodes and aorto-pulmonary nodes for fine needle aspiration. It is less invasive than open surgery or laparoscopy for tissue diagnosis.

### Objective

To examine the impact of EUS FNA on operable as well as inoperable carcinoma.

### Materials and Methods

Retrospective analysis of patients who underwent EUS FNA in Selayang Hospital over a period of 6 months in 2004. The cytology reports, CT scan results, operative findings and histology from operative specimens were documented. The FNA is said to be positive when the result shows malignant cells or atypical cells suggestive of malignancy and is said to be negative when the result shows no malignant cells.

### Results

There were 24 patients who had positive EUS FNA. Twelve FNA were obtained from lymph nodes (8 coeliac, 3 aorto-pulmonary and 1 peripancreatic nodes) and the other 12 were from pancreatic lesions. The primary for the lymph nodes is mainly cholangiocarcinoma followed by other gastrointestinal malignancies. Sixteen out of the 24 patients with positive FNA were deemed inoperable. Another 2 patients, both of whom had positive FNA for pancreatic lesions, had subsequent laparotomy which revealed peritoneal metastases. The information on subsequent management for the remaining 6 patients was not available as they were managed by other units. Negative FNA were seen in 7 cases, 6 of whom had pancreatic lesions and 1 had coeliac node. Surgery was deemed unnecessary in 2 pancreatic lesion cases based on the negative EUS FNA and the resolution of the pancreatic abnormality on subsequent CT scans. Two patients with negative EUS FNA were operated and the histology showed neuroendocrine tumour. One patient was deemed inoperable after subsequent percutaneous liver biopsy showed adenocarcinoma. One patient defaulted his follow up.

### Conclusion

Positive EUS FNA in this series helped to influence the decision making in patients with coeliac and aorto-pulmonary nodes, as well as pancreatic lesions. Positive EUS FNA of the nodes helps to confirm diagnosis of nodal metastasis and hence inoperability if the nodes are away from the primary lesions. For inoperable pancreatic cancer cases, positive EUS FNA allow decision to be made to offer palliative chemotherapy.

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