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Asmarian NS, Ruzitalab A, Amir K, Masoud S, Mahaki B. Area-to-area Poisson Kriging analysis of mapping of county-level esophageal cancer incidence rates in Iran. Asian Pac J Cancer Prev 2013;14(1):11-3

Improved understanding of the region specific incidence of esophageal cancer in Iran may help to identify modifiable risk factors and inform resource allocation. This epidemiological study characterised the incidence of esophageal cancer in 336 counties of Iran between 2003 and 2007 using area-to-area Poisson Kriging analysis of data recorded by the Ministry of Health and Education of Iran. Data was adjusted using the 2006 population pyramid. The population-weighted average esophageal cancer rate was 2.92 per 100,000 person years. The Northern counties, particularly Ardebil, Mazandaran and Kordestan provinces, were associated with the greatest risk of esophageal cancer. The reasons underpinning this inter-county variability in esophageal cancer incidence remain unclear and should be investigated in future studies.

Morrison DS, et al. Behavioural and metabolic risk factors for mortality from colon and rectum cancer: analysis of data from the Asia-pacific cohort studies collaboration. Asian Pac J Cancer Prev 2013;14(2):1083-87

This retrospective study investigated several risk factors associated with colon and rectum cancer mortality. Data was analysed from 600,427 adults with 4,281,239 person-years of follow-up collected from the Asia-Pacific cohort study collaboration. The mortality from colon and rectum cancers was 455 and 158 patients respectively. Colon cancer mortality was associated with increasing age (hazard ratio (HR) 1.09, 95% confidence interval (CI) 1.08-1.10), height (HR 1.03, 95% CI 1.00-1.06) and body mass index (BMI) (HR 1.03, 95% CI 1.00-1.05) and was reduced by physical activity (HR 0.72, 95% CI 0.53-0.96). A similar association was observed between combined colorectal mortality and age (HR 1.08, 95% CI 1.08-

1.09), height (HR 1.03, 95% CI 1.01-1.06), BMI (HR 1.03, 95% CI 1.00-1.05) and physical activity (HR 0.76, 95% CI 0.59-0.96). Only age was a significant determinant of rectum cancer mortality (HR 1.08, 95% CI 1.06-1.10). Current smoking or alcohol consumption, serum cholesterol level, presence of diabetes and completion of secondary education were not significantly associated with mortality from colon or rectal cancer. Whilst accepting the limitations of analysing retrospective non-standardised data, BMI and physical activity are highlighted as modifiable risk factors for colorectal cancer mortality in Western and Asian populations.

Metaferia B, et al. Development of peptide nucleic acid probes for detection of the HER2 oncogene. PLoS One 2013 April 10;8(4):1-7

The early detection of HER2, an oncogene associated with aggressive and treatment resistant breast cancer, is important to optimise management. HER2 testing is being used to estimate prognosis and optimize the treatment of oesophageal and gastric cancer. This article reports the in vitro development of 15/16-mer peptide nucleic acid (PNA) probes with high specificity for the quantitative measurement of HER2 mRNA. These findings may contribute to development of a new diagnostic test for HER2 using PNA probes however comparison with existing diagnostic tests including sensitivity, specificity and cost effectiveness should occur.

Jiang ZJ, et al. Management hepatolithiasis with operative choledochoscopic FREDDY laser lithotripsy combined with or without hepatectomy. Hepatobiliary Pancreat Dis Int 2013 April;12(2):160-4

The effective treatment of hepatolithiasis, a common condition in East Asia, is important to minimise serious complications including biliary cirrhosis, liver failure and cholangiocarcinoma. This retrospective study investigated the efficacy and safety of

choledochoscopic Frequency-Doubled Double pulse Nd:YAG (FREDDY) laser lithotripsy combined with or without hepatectomy in the management of 45 patients with hepatolithiasis between July 2009 and October 2012. Comparison was made with 48 patients with hepatolithiasis managed by traditional methods (forceps and irrigation lithotripsy, choledochoscopic basket catheter lithotomy and hepatectomy) between January and June 2009.

There was no significant difference between stone clearance rates, procedural complication rates or mean hospitalisation time between the laser lithotripsy and traditional method groups. Mean operative time was significantly less in the laser lithotripsy group compared to the traditional method group (8.2 ± 1.22 d and 9.8 ± 1.63 d respectively ($p=0.01$)). This study highlights operative choledochoscopic FREDDY laser lithotripsy with or without hepatectomy as a novel treatment for hepatolithiasis with similar efficacy and safety to traditional methods. Further studies evaluating greater sample sizes are needed to better define the clinical usefulness of laser lithotripsy compared with current best management.

Alexander AM, et al. Evaluation of a programme for prevention of vertical transmission of hepatitis B in a rural block in Southern India. Indian J Med Res 2013 February;137(2):356-362

Vertical transmission, an important route of hepatitis B infection in India, may be prevented by early immunisation. This retrospective cohort study evaluated the effectiveness of a hepatitis B immunisation programme targeted to 131 children born to hepatitis B surface antigen (HBsAg) positive women in Kaniyambadi rural block, South India between May 2002 and December 2007. The prevalence of HBsAg among antenatal women was 1.58% (95% CI 1.35-1.81%). A full course of three hepatitis B vaccines was completed by 93.9% of children however only 55.0% achieved the recommended schedule of a dose at birth, one and two months of age. All children received at least one dose of the hepatitis B vaccine, 85.0% and 87.8% within 24 and 48 hours of birth respectively.

HBsAg positivity was identified in 5.4% of children who received a full vaccination course. Using

previously calculated hepatitis B transmission rates in unimmunised children (17.0%) the effectiveness of the full targeted vaccination programme was estimated at 68.0% with a number needed to treat of 8.6. A seroprotection rate of 92.4% was achieved in children aged six to 24 months who received three vaccine doses. The authors suggest that selective immunisation may be useful in regions of low antenatal HbsAg prevalence although whether this is superior to less-targeted immunisation models in terms of clinical and cost effectiveness remains unclear.

Jiang M, Sewitch MJ, Barkun AN, Joseph L, Hilsden RJ. Endoscopist speciality is associated with colonoscopy quality. BMC Gastroenterology 2013;13:78

The effectiveness of colorectal cancer screening is highly dependent on colonoscopy quality however whether this is influenced by endoscopist speciality remains unclear. This cross-sectional study investigated the relationship between polypectomy rate, a colonoscopy quality indicator, and endoscopist speciality (gastroenterology or surgery) in 2113 and 538 colonoscopies completed in Montreal and Calgary, Canada respectively. Endoscopists in Montreal included 38 gastroenterologists (89.3% of colonoscopies) and six surgeons and in Calgary there were 31 gastroenterologists (82.1% of colonoscopies) and five surgeons. Odds ratios (OR) were adjusted for patient age, sex, family history of colorectal cancer, indication for colonoscopy (screening or non-screening) and whether the patient had previously undergone colonoscopy.

In Montreal surgeons were 48% less likely to remove polyps compared to gastroenterologists (OR: 0.48, 95% CI: 0.32-0.71). This may reflect differences in training or case load. Although no significant relationship was observed in Calgary, these findings may suggest that either gastroenterologists should assume a greater colonoscopy workload or surgeons require further colonoscopy training. In addition to considering a greater patient and endoscopist sample size, future studies should aim to distinguish the specific differences between endoscopist specialities and evaluate their effect on other colonoscopy quality indicators.

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