

and more expensive drugs and using wider spectrum of preparations although recent advances in pharmacological treatment and diagnostics are coming in practice with delay.

**Conclusions:** Rising BC incidence keeps bringing new challenges for healthcare system. Breast cancer incidence is rising so quickly in Grodno region (1.36 times during 12 years) that there is a vital need of development of prevention strategies.

## P20

### Early detection of upper gastrointestinal tumors based on molecular analysis

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Molecular analysis of p53 (plays a crucial role in cellular proliferation and apoptosis) might help to identify patients from high risk population at early stage of malignant transformation.

**Materials:** Immunohistochemical staining was performed on routinely processed paraffin primary tumour sections from 28 patients with cancer (5 esophageal squamous cell carcinoma, 23 adenocarcinoma of gastroesophageal junction (Siewert 1-2-3) (S1, S2, S3) and 13 patients (control group) with non-cancer lesion or normal tissue of upper digestive tract. P53 was evaluated by 2 categories: intensity and diffusion. Complete resection was performed for all cancer patients.

**Results:** We found no association between p53 expression and median survival of esophageal and cardia cancer patients ( $p=0.004$ ). P53 was significantly higher in the cancer tissue than in normal ( $p=0.014623$  for diffusion,  $p=0.003382$  for intensity). p53 was significantly lower ( $p<0.001$ ) in the S3 group than in S2. But no significant difference was observed in p53 expression between S1 and S2 cancers (both for diffusion and intensity).

**Conclusions:** P53 expression does not indicate prognosis of patients with upper digestive tract tumors. P53 examination in biopsy specimens taken during endoscopies in patients with precancerous lesions may be helpful for early detection of upper digestive tract tumors.

## P21

### Colorectal cancer incidence trends in US and UK populations: a right- to left-sided biological gradient with implications for screening and chemoprevention

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**Background:** Several lines of evidence support the premise that screening colonoscopy reduces colorectal cancer (CRC) incidence, but there may be differential benefits for right- and left-sided tumours. To better understand the biological basis of this differential effect, we derived bio-mathematical models of CRC incidence trends in US and UK populations, representing relatively high- and low-prevalent screening, respectively.

**Methods:** Using the Surveillance Epidemiology and End Results (SEER) and the Office of National Statistics (ONS) registries (both 1973 to 2004), we derived stochastic multistage clonal expansion (MSCE) models for right- (proximal colon) and left- (distal colon and rectal) sided tumours. The MSCE concept provides a quantitative description of natural tumour development from the initiation of an adenoma (via biallelic tumour suppressor gene inactivation) to the clinical detection of CRC.

**Results:** From 1,148,546 (SEER: 320,521; ONS: 828,025) cases, parameters estimates for the calendar-cohort adjusted models showed that adenoma initiation rates were higher for

right-sided tumours while adenoma growth rates were higher for left-sided tumours. The net effect was a higher cancer risk in the right colon after age 70 years. Consistent with this finding, simulations of adenoma development predicted that the relative prevalence for right- versus left-sided tumours increases with increasing age; a differential effect most striking in women.

**Interpretation:** Using a realistic bio-mathematical description of CRC development for two nationally representative registries, we demonstrate age- and sex-dependent biological gradients for right- and left-sided colorectal tumours. These findings argue for an age- and sex- and site-directed approach to CRC screening and chemoprevention.

## P22

### Kenyan children with cancer: Controlling Burkitt's lymphoma

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**Background:** Over 300 children are diagnosed with Burkitt's Cancer every year in Kenya. The changing lifestyle, poverty and lack of knowledge play a vital role in the rise of cancer amongst poor villagers in Kenya. The research gathered by Go Fishnet Youth Project conducted in western Kenya shows the number of cases of Burkitt's Lymphoma reported at various health facilities as increasing due to high level of poverty and lack of awareness while the possibility of eradicating it is 80% if Kenyan people at grassroot level had resources available and good diet!

**Methods:** The Ministry of Health in conjunction with Go Fishnet Youth Project and other partner Community Based Organizations (CBOs) have come up with a multi-sectoral approach of preventing and controlling and if possible eliminating the spread of cancer among children in western Kenya. This new approach brings together individual groups and expertise to combine their efforts to fight and control cancer. Go Fishnet Youth Project has a termly educational exchange programme and counseling in various primary and secondary schools to sensitize young girls and boys to recognize possible signs of the disease and how to respond quickly without fear of stigma if suspected. Other cancer cases are encouraged for aggressive therapeutic programmes within prophylaxis (prevention) programmes.

We carry out these initiatives through:

Every-home-crusade and diagnosis in schools, villages and hospital facilities.

Organize workshops to train volunteer community based workers for village awareness and sensitization programmes.

Creation of home-based care to provide lectures and teachings on basis initiatives to eradicate poverty and have plenty of food from small scale farming and local infrastructures.

**Result:** With Prophylaxis (Prevention) programme, the patients who report early have a survival rate of 90%; among children however most cancers are reported late with poor treatment. Lack of enough and adequate food contributes to the cause of cancer among children because cancer actually is caused by the Epstein-Barr (EB) virus. This virus can stay in the system and gets frequent bouts of malaria with poor treatment which results into cancer. This cancer occurs when children's B-lymphocytes (jaw area lymphodes) are infected with EB virus. This infection is common in Kenya and usually causes no long-term problems and can be prevented.

**Conclusion:** Cancer amongst children in Kenya can be controlled, treated and eradicated if we have enough sensitization and awareness programmes at the grassroot levels. This includes mobilization of community based workers, media, youth initiatives for change in the society