Methods: We have collected 68 genetically characterized tumors: 5 SDHB, 1 SDHC, 4 SDHD, 10 RET, 12 VHL, 2 NF1, 3 familial cases without mutations and 31 sporadic tumors. The transcriptional profiles obtained using the ® Agilent gene expression microarrays platform (Whole Human Genome, 4x44k) were subsequently analyzed with the ©GEPAS bioinformatics package. Quantitative RT-PCR and immunohistochemical assays will be performed to validate the transcriptional profiling data on the same collection of tumours, as well as on an independent series of paraffin embedded tumours respectively.

Result and conclusion: Will be presented at the Meeting.

Grants:

Fondo de Investigaciones Sanitarias, projects PI061477 and PI042154, and the Centro de Investigación Biomédica en Red de Enfermedades Raras (CIBERER), ISCIII

POSTER SESSION

Survivorship research

622 Poster

Survival rate of gastric and esophageal cancers in Ardabil Province, North-West of Iran

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Background: Upper gastrointestinal cancer is the most common cancer in Ardabil Province, North-West of Iran, accounting for more than 50% of all cancer deaths in this area. We conducted this study to determine the present survival rate of patients with esophageal and gastric cancers before launching interventional studies. Methods: A prospective follow-up study of 420 biopsy-proven patients (127 females, mean age: 64) with upper gastrointestinal cancer (141 esophageal and 279 stomach cancers) who were initially diagnosed in Aras Clinic, the main gastrointestinal referral center of Ardabil Province, from 2000 through 2004, was performed with collection of data on demographics, tumor characteristics, pathologic stage, treatment methods, complications, survival time, etc. Data were gathered through direct interview with patients or their families in 303 cases and evaluation of death certificates in 55 patients. Follow-up was from cancer diagnosis until death, or immigration. Survival according to stage of disease, Lauren tumor type, tumor location, surgery, and adjuvant chemotherapy was analyzed, and results were compared with those of western series. Results: Sixty-two cases were lost to follow-up. The one- and five-year survival rates in the patients with upper gastrointestinal cancer in Ardabil Province were 40.5%, and 0.8%, respectively. In the univariate analysis, men had a slightly lower survival rate than women ($P = 0.21$) and patients with esophageal cancer had a longer survival rate compared to stomach cancer patients ($P = 0.15$). Patients who had undergone surgery ($P < 0.001$) and/or chemotherapy ($P < 0.001$) survived longer than those without such treatments. Tumor morphology, age at diagnosis, radiotherapy, alcohol, and opium consumption did not show any significant effects on the survival rate of patients. In multivariate analysis, only smoking was remained as an independent factor for stomach cancer ($P = 0.04$) while in esophageal cancer, surgery and grade of differentiation were significant predictors of survival. Conclusion: Survival rate of stomach and esophagus cancer cases in Ardabil is relatively low. Intervention for early detection and therapy is necessary to increase survival.

623 Poster

Cognitive performance (cp), informed consent (ic), and age among advanced cancer patients (acp)

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Introduction: Cognitive impairment (CI) among cancer patients has been well described and is believed to be due to various factors, e.g. age and chemotherapy. Prior research indicates that acp participating in phase I clinical trials inadequately understand many elements of IC, but the prevalence of CI has not been well described in this population.

Methods: Acp CP was evaluated using a neuropsychological battery designed to assess domains of decisional capacity: Memory (Hopkins Verbal Learning HVLT and Mini-Cognitive Assessment); Executive Functioning (Verbal Fluency and Trail-making A/B); Language (Boston Naming-short); Attention (Digit Span); Comprehension (Auditory Comprehension & WAIS comprehension). Semi-structured interviews also evaluated IC, and included the Hospital Anxiety and Depression Scale (HADS), BDI-II, and the FACT-COG.

Results: To date, a total of 180 acp enrolling in Phase I trials have been studied: median age: 58y (range: 23-83y); 69% male; 86% Caucasian; 73% > HS education. Only 25% of responding acp correctly identified the purpose of Phase I trials. Older acp (>age 55y) were less likely to correctly describe the research purpose of the trial (30% v. 71% $p=0.02$). Older acp had measurable deficits in CP: Boston (13 ± 1 v.14 ± 0.8, $p<0.0$); HVLT Total Recall (16 ± 6 v. 24 ± 5, $p<0.00$) and Discrimination Index (8.3 ± 3 v.11 ± 2, $p<0.00$); Digit Span (15 ± 5 v. 19 ± 2, $p<0.00$); Trail-making A (61 ± 28 v. 41 ± 22, $p<0.00$) & B (178 ± 90 v.109 ± 56, $p<0.00$). ACP who correctly identified the purpose of a Phase I had greater CP as assessed by memory tasks (38.1 ± 7.9 v. 33 ± 2.6, $p=0.04$) and greater attentional abilities (21.1 ± 4.3 v. 18.6 ± 2.3, $p=0.06$). ACP who recalled that palliative care/hospice was presented as an option experienced greater deficits in processing speed & mental flexibility (282 ± 104 v. 214 ± 97, $p=0.04$). Older acp tended to report more depressive symptoms (14 ± 11 v. 6 ± 5, $p<0.00$). Also, older acp had FACT-COG scores well below reported means for impact on quality of life (24 ± 7 v. 27 ± 10, $p=0.03$). Conclusions: Our data strongly indicate that there are clear associations between several measurable domains of CP and understanding of the elements of IC for early phase clinical trials especially among the elderly.

624 Poster

The effect of cabbage juices on the activity and expression of GST isozymes in HepG2 cells

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There is a very convincing epidemiological evidence that a diet high in cruciferous vegetables protects against tumorigenesis in many tissues, including the colon. A substantial part of this protective effect has been ascribed to the induction of detoxifying enzymes especially glutathione S-transferase (GST). GSTs are superfamily of enzymes which catalyze the conjugation of some electrophilic compounds with glutathione. Based on the structural, physicochemical, enzymatic and immunological properties the cytosolic GSTs are divided into four classes: alpha, mu, pi and theta. The induction of GST was closely correlated to reduction in the number of chemically induced tumours in humans or human cells. The human hepatoma cell line HepG2 retains many of the xenobiotic metabolizing enzymes found in normal hepatocytes, including an inducible GST. The predominant isoform of GST that is induced by xenobiotics in this cell line is GST alpha.

Our previous in vivo studies demonstrated the modulation of GST isozymes expression by cabbage and sauerkraut juice in rat liver and kidney. To get a more complete view about the mechanism of anticarcinogenic properties of cabbage, in this study the total activity of GST and expression of GSTs alpha, mu, pi and theta by Western blot in hepatoma cell line HepG2 were analyzed. HepG2 cells were incubated with cabbage juices obtained from vegetables cultivated in industrial and ecological farms for 3, 6 and 24 hours.

Administration of the all cabbage juices for 3, 6 and 24 hours significantly enhanced activity of GST in HepG2 cells. Changes in the expression of GST isozymes in HepG2 cells were dependent on time of treatment. In HepG2 the constitutive expression of the all tested GST isozymes was detected. However, the expression of GST in HepG2 was lower than in rat liver. Western blot analysis showed that the all cabbage juices increased the expression of GST class alpha (by 30%) and to lesser extent the GST class mu at all time points of exposure, but did not affect the GST theta and pi.

The results of this study indicate that cabbage juices are effective inducers of human GST in agreement with previous studies on GST in animals. Modulation of the total activity and expression of GST isozymes may be responsible for their biological activity and chemoprotective properties of cabbage.

625 Poster

A psychoeducation group for patients at the end of primary treatment for cancer - preliminary results

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Background: End of treatment has been shown to be a very difficult time for patients, as they often feel vulnerable with less frequent contact with the health service, anxious about disease recurrence and under stress