

variables available at one year follow-up did not improve the nomogram. The nomogram outperformed the UICC 7th edition staging system.

Conclusions: A robust gastric cancer nomogram was developed, with the unique ability of predicting improved survival for patients alive at time points after surgery. Introduction of variables available at one year after resection did not further improve this nomogram. This might be caused by the limited availability of follow-up data, as well as by the already strong predictive accuracy of the baseline variables. For individual patient prognosis, the nomogram should be the preferred choice over the UICC staging system.

6634

POSTER

5-year Experience in Diagnosis and Treatment of Neuroendocrine Tumours

S. Sadighi¹, S. Vahedi¹, E. Jahanzad¹, J. Raafat¹, M.A. Mohagheghi¹, F. Fereidoony¹. ¹Cancer Institute, Cancer Research Center, Tehran, Iran

Background: Although neuroendocrine tumours (NETs) are considered rare tumours, there are several reports of increasing incidence and evolving treatment of NETs. The aim of this prospective study was to describe clinical characteristics and treatment outcomes of NETs diagnosed at Iran Cancer Institute between 2003–2009.

Material and Methods: All 185 NETs were documented with central pathology-immunohistochemistry review according to WHO criteria. Choosing medical therapy including somatostatin analogue (LAR), interferon- α or chemotherapy was based on WHO grading system. Cox-regression analysis was used to find independent factors of better survival.

Results: Median age of the patients was 51 and 85 were women (45.9%). The most common sites of disease were unknown primary (31), stomach (19) and small intestine (17). There was a 43.2% primary pathologic diagnosis of NETs. Others were diagnosed as poorly differentiated carcinoma, adenocarcinoma or small round-cell tumours at first. Although only 32% of the patients had localized NET, 50% underwent curative surgery even with regional or metastatic disease. Overall 5-year survival was 38% (68% for carcinoid tumours). Median survival was 100 months by using combination of LAR and interferon in low and intermediate grade advanced tumours, compared to 52 months for LAR or 16 months with interferon alone.

Conclusion: The increased use of more sensitive and specific neuroendocrine tumour markers now identified poorly differentiated NETs, which changed the prevalence and site distribution of disease. Despite advanced stage, surgery played a major role in treatment of our patients. A combination of LAR and interferon has been very effective in patients with advanced disease.

6635

POSTER

Molecular Prognostic Factors in Gastric Cancer

A.S. Zenyukov¹, I.S. Stilidi¹, T.F. Borovskaya², M.P. Nikulin¹, T.V. Zenyukova³, S.B. Sagaydak⁴, S.V. Bekov⁵. ¹N.N.Blokhin Russian Cancer Research Center of the Russian Academy of Medical Sciences, Surgical Abdominal Oncology Department, Moscow, Russian Federation; ²Far Eastern State Medical University, Diagnostic Laboratory, Khabarovsk, Russian Federation; ³N.N.Blokhin Russian Cancer Research Center of the Russian Academy of Medical Sciences, Pathology Department, Moscow, Russian Federation; ⁴Khabarovsk Oncology Center, Department of Oncology-1, Khabarovsk, Russian Federation; ⁵Khabarovsk Oncology Center, Department of Pathology, Khabarovsk, Russian Federation

Background: The depth of tumour invasion, primary tumour histology, lymph node status, stage are generally used as routine prognostic factors in gastric cancer. In this study we've investigated molecular markers which can possibly predict high risk of a tumour progression in gastric cancer.

Materials and Methods: To evaluate the relationships of immunohistochemical expression of MMP-2, MMP-9, E-cadherin, β -catenin, c-erbB-2, EGFR with prognosis of gastric adenocarcinoma patients (n=91), who underwent curative surgery at Khabarovsk Oncology Center.

Results: The reduced membrane expression of the adhesion's protein E-cadherin was demonstrated in 61 (67.0%) gastric carcinomas and correlated negatively only with lymph node metastases (p=0.024). In 46 tumours (50.5%) the β -catenin overexpression (another protein of adhesion) has been found. The β -catenin overexpression was associated with depth of tumour invasion (p<0.001), lymph node metastases (p<0.001) and advanced stage (p<0.001). There was no correlation between expression of E-cadherin and β -catenin and 3-year disease free and overall survival (p=0.416, p=0.330 and p=0.156, p=0.438). 46 cases (50.5%) showed the matrix metalloproteinases-2 (MMP-2) overexpression. The MMP-2 overexpression was associated with depth of tumour invasion (p=0.002), lymph node metastases (p=0.003) and advanced stage (p=0.002). Hyperexpression of the MMP-9 has been found in 50 (54.9%)

gastric carcinomas. MMP-9 expression correlated with advanced stage (p=0.004), depth of invasion (p<0.001). There was no correlation between expression of MMP-2 and 3-year disease free and overall survival, but hyperexpression of MMP-9 was associated with poor 3-year disease free survival and overall survival (p=0.008, p=0.003). The membrane hyperexpression of the epidermal growth factor 2 type (c-erbB-2 or Her-2/neu) has been observed in 31 patients (34.1%). In 19 (20.9%) patients the EGFR membrane hyperexpression (the epidermal factor of growth 1 type or c-erbB-1) has been found. The c-erbB-2 and EGFR overexpression were associated with depth of tumour invasion (p=0.009, p=0.025), lymph node metastases (p<0.001, p<0.001) and advanced stage (p<0.001, p=0.003). There was no correlation between expression of c-erbB-2 and EGFR and 3-year disease free and overall survival (p=0.999, p=0.796 and p=0.864, p=0.669).

Conclusions: Stomach cancer is an immunohistochemical heterogeneous tumour, but the overexpression of MMP-9 is the only one which can predict 3-year disease free survival and overall survival, and so can be a possible target for therapeutic agents.

6636

POSTER

Pancreatic Exocrine Insufficiency in Advanced Pancreatic Cancer – Fecal Elastase-1 (FE-1) Value Is a Strong Independent Predictor of Poor Survival

S. Partelli¹, L. Frulloni², S. Crippa¹, C. Minniti¹, M. Falconi¹.

¹Policlinico G.B. Rossi, Surgery, Verona, Italy; ²Policlinico G.B. Rossi, Gastroenterology, Verona, Italy

Background and Aims: Pancreatic exocrine insufficiency (PEI) can be diagnosed with high accuracy by the measurement of fecal elastase-1 (FE-1). The relationship between prognosis of advanced pancreatic cancer (PC) and PEI is unknown. Aim of the present study is to investigate a possible correlation between FE-1 value and survival in patients with advanced pancreatic cancer (PC).

Methods: A prospective observational non-randomized study was conducted at our institution between 2007 and 2009. All patients with an unresectable PC were enrolled. FE-1 was measured in all the subjects at the admission. PEI was considered "absent" when FE-1 was greater than 200 mg/gram, "moderate" if FE-1 was 100–200 mg/gram, "severe" if FE-1 was less than 100 mg/gram and "extremely severe" if FE-1 was less than 20 mg/gram. Univariate and multivariable analyses were performed.

Results: During the study period 194 patients with unresectable PC were enrolled. The median value of FE-1 was 204 mg/gram (IQR 19; 489 mg/gram). In 97 patients (50%) FE-1 value was >200 mg/gram. Overall, 48 (25%) had an extremely severe PEI, 28 (14%) had a severe PEI and 21 (11%) had a moderate PEI. Patients with extremely severe PEI had a higher incidence of albumin values <40 g/L (44% versus 29% versus 14%, P<0.01), a higher distribution of pancreatic head localizations (96% versus 73.5% versus 59%, P<0.01), a higher rate of jaundice (70% versus 37% versus 34%, P<0.01). The median overall survival was 10.5 months. Patients with FE-1 \leq 30 mg/gram had a significantly worse prognosis (median survival of 7 months versus 11 months, P=0.031). By multivariable analysis, the presence of metastases (HR 1.81, P<0.0001), hemoglobin \leq 12 g/L (HR 2.12, P=0.001), albumin \leq 40 g/L (HR 1.64, P=0.010) and FE-1 \leq 20 μ g/gram (HR 1.59 P=0.023).

Conclusions: For the first time we demonstrated that a low value of FE-1 is strongly correlated with poor survival in patients with advanced pancreatic cancer. Further studies are needed to investigate a potential role of enzyme replacement therapy in patients with advanced pancreatic tumours.

6637

POSTER

Rehabilitation for Patients With Upper Gastrointestinal or Gynaecological Cancers – the Patient's Perspective

C. Shaw¹, C. Sandsund¹, N. Doyle², N. Pattison³. ¹The Royal Marsden NHS Foundation Trust, Rehabilitation, London, United Kingdom; ²The Royal Marsden NHS Foundation Trust, Clinical Services Department, London, United Kingdom; ³The Royal Marsden NHS Foundation Trust, Nursing Risk and Rehabilitation, London, United Kingdom

Objectives: This study investigated patient's experiences of rehabilitation needs following treatment for gynaecological (GYN) or upper gastrointestinal (UGI) cancer.

Methods: Participants were recruited to focus groups from consecutive outpatient clinics at a UK cancer centre. These were audiorecorded, transcribed verbatim and continued until data saturation was reached and confirmed (at the fifth group). Data were collected and analysed using grounded theory and coded independently by two researchers.

Results: Thirty-three men and women who had completed treatment participated in the groups from July to October 2010. A core theme of "seeking a new normality" was evident throughout the research. Four key