with microsatellite markers TNFa, D6S273, D6S291 in DNA samples prepared from the serial tissue sections.

Results: Low Ki-67 nuclear expression was found in 45% of CIN1-2 and 25% of CIN3 lesions. Namely, less then 30% of cells in lower two thirds of the epithelium thickness were Ki-67 positive. The rest of CIN lesions revealed Ki-67 nuclear expression in 60-90% of cells in all layers of cervical epithelium. Expression of Ki-67 in microcarcinomas varied from 30% to 90% of cells while invasive SCC had 50-70% of stained nuclei. Survivin expression increased with the severity of CIN lesion, reflecting the reduction of apoptosis. Thus survivin expression was detected in 25% of CIN1, 50% of CIN2 and 67% of CIN3. Cytoplasmic expression of survivin was found in 70% of CC. Only few CIN cases (22%) were negative for Ki-67 and survivin that correlated with the retention of microsatellite heterozygosity at 6p21.3. We suppose these CIN lesions may regress with apoptosis.

Conclusions: The obtained results suggested that the combination of immunostaining for Ki-67 and survivin might be helpful in early diagnostic of cervical lesions and evaluation of further CIN progression.

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Informative comprehension of detection of chimeric genes PAX3/7-FKHR in prognostically unfavourable forms of rhabdomiosarcomas in children

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Background. Alveolar rhabdomyosarcoma (ARMS) is an aggressive soft tissue malignancy of children. Most ARMS patients express PAX3-FKHR or PAX7-FKHR gene fusions resulting from t(2;13) or t(1;13) translocations, respectively. The availability of them in tumor correlates with sensitivity to cytostatics and efficacy of the treatment. These markers can be detected also in bone marrow (B?), that is a feature of micrometastases or minimal residual disease.The objective of the work is to determine informative comprehension of detection of expression of chimeric gens PAX3-FKHR and PAX7-FKHR in cells of tumor and BM in prognostically unfavourable forms of rhabdomyosarcomas (RMS) in children. Materials and methods. Tumor tissue and BM, obtained during the treatment (from 3 aspirates per one examination), from 26 childhood RMS patients, aged 3-11. The treatment of patients was carried out in accordance with protocols: Protocol EpSSG RMS 2005 for non-metastatic embryonal and alveolar RMS; CWS-96 for metastatic (IV stage) and recurrent RMS. Choice of protocol was based on determination of PAX3-FKHR and PAX7-FKHR fusion status. Fusion status was determined using the real-time RT-PCR method. Results. Chimeric genes in cells of tumor have been detected in 11 patients that evidence on belonging of these tumors to RMS of alveolar type (aRMS), which are of unfavourable prognosis and require different from embryonal RMS protocols of polychemotherapy (PCT). At a moment of making out a diagnosis in 8 of 11 patients with aRMS chimeric transcripts PAX3-FKHR and PAX7-FKHR in BM were detected that evidence on IV stage of disease. In 1 patient they were detected in all 3 points of BM. During a year from diagnosis and beginning of the treatment 5 of 8 patients of this group died. After course of PCT in two patients chimeric genes in BM were not detected, that evidence on the efficacy of the treatment. Conclusions. High sensitivity of real-time RT-PCR assays are capable of identifying PAX3-FKHR and PAX7-FKHR fusion status both in tumor and submicroscopic metastatic disease in sites such as the BM. Our study has demonstrated the clinical utility of fusion gene detection in differential diagnosis, prognosis, and minimal disease monitoring, as well as allows determine the rate of achieved remission.

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Prognosis and recurrence pattern of patients with cervical carcinoma and pelvic lymph node metastasis

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Objective to investigate the prognostic risk factor(s) and pattern of disease relapse of patients with cervical carcinoma and pelvic node metastasis. Methods 124 cases of FIGOIB1~IIA cervical carcinoma with pelvic node metastasis treated from January 1991 to December 2001 were selected for this study. Prognosis and recurrence were retrospectively analyzed using the clinico-pathological data. Results The over all 5 year survival and disease-free survival (DFS) was 63.3% and 61.4% respectively. Overall recurrence rate was 39.5% (49/124). Intra-pelvic relapse (25/41, 61.0%) was significantly more frequent than extra-pelvic relapse (13/41, 1.7%, P=0.008).Multivariate analysis identified involvement of common iliac node as independent prognostic factor (P=0.035). According to this factor, node-positive patients could be divided into low risk group (without common iliac node involvement, 104 cases) and high risk group (with common iliac node involvement, 20 cases). The DFS were 69.4% and 24.5% respectively, and the difference was significant (P=0.003). Intra-pelvic relapse was observed in 22.1% of low risk and 25.0% of high risk group respectively, the difference was not significant (P>0.05), however extra-pelvic relapse was seen in 7.7% of low risk and 40.0% of high risk group, and the difference was significant (P<0.001). Conclusions Common iliac node involvement is the significant factor that influences the prognosis of patients with cervical carcinoma and pelvic node metastasis. According to this factor, survival and recurrence pattern differs significantly. These findings provide important reference for individualized modification and investigation of treatment mode.

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Clinical and pathological features of primary lymphoma of bone

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Introduction: Primary lymphoma of bone (PLB) is a rare disease, first described by Oberling in 1928. Even today the diagnosis of PLB can be difficult due to the relatively non-specific clinical signs and ambiguous radiographic features. Here we have reviewed the patients presenting with PLB, their clinical features, especially the relation between clinical stages and patients' outcome.

Patients: In this study, PLB was defined as follows. 1) Malignant lymphoma presenting a single or multiple bone lesion(s) with or without invasion to surrounding soft tissue. 2) There is no evidence of visceral or nodal involvement at the time of first diagnosis after the several radiographic screening, including whole body CT scanning, gadolinium scintigraphy.

According to the definition, we have experienced 17 cases of PLB from 1991 to 2005 in National Cancer Institute, Japan. All patients were diagnosed as PLB with needle and/or open biopsies. There were eight males and eight females varied 8 to 73 years old (Median 41 years old) at the time of diagnosis. The median follow-up period was 7.2 years (8 month to 11 years). The affected bone lesions were as follows. Femur and ilium: 5cases, thoracic vertebrae, sacrum and tibia: 3 cases, lumber vertebrae and rib: 2 cases, skull and humerus: 1 case. There were no specific radiographic images on PLB, except for the occasional extensive abnormal bone marrow signal on MRI whereas plain X-ray images were negative. Histopathologically, there were 11 cases of diffuse large B cell lymphoma, 3 cases of anaplastic large cell lymphoma (K1-lymphoma) and lymphoblastic lymphoma (precursor B cell type) and low grade B cell lymphoma (unclassified) accounted for the rest of two cases. Clinical stages (Ann Arbor) at the diagnoses, Stage IE: 9cases, stage IV: 7cases.

Result and Conclusion: All cases were treated with the combination of systemic chemotherapy(including anti-CD20 antibody; rituximab)with or without local radiotherapy. Surgical treatments were performed in 6 cases; laminectomy and instrumentation of thoracic vertebrae 2 cases, osteosynthesis of pathological fracture 3 cases, total hip arthroplasty 1 case. Overall survival rate was 81% (13/16). (Mean survival time; 46 months) Overall survival rate of stage IV was 71% (5/7), relatively good outcome compared to that of the historical control of stage IV patients including nodal or visceral involvement. These clinical outcomes might suggest the possibility of specific biological features of lymphoma cells only with skeletal involvement.

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Assessment of vascularity in gastric malignant tumors

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Introduction: Assessment of angiogenesis is possible nowadays by various methods: imaging methods, molecular biology and pathological exams. A high value of vascularity index is correlated with an advanced disease, thus the angiogenesis assessment could offer important preoperative parameters.

Method: In our study we proposed to assess the vascularity index in gastric adenocarcinoma using imaging method comparing to pathological markers (microvessel density, CD34, VEGF).

We included 8 patients with gastric cancer assessed by endoscopic ultrasound with color Doppler, power Doppler and pulse Doppler possibilities. We computed the vascularity index using a custom-made application based on the free ImageJ open-source software. The ROI