were evaluated and compared with the theoretical energy requirements.

Results Mean caloric intake on the first day was 59% (SD±46.4) and on the second day was 64.3% (SD±47.4) of daily requirements. 72(57.1%) patients received ≥80% of required daily calories, without a significant difference with patients who received <80% of daily calories, (p=0.3).

The overall mortality rate was 28.5%. Patients who received <80% of daily caloric needs were 4 times more likely to have a fatal outcome, compared to those who received ≥80% of daily caloric needs [OR=4.0 95% CI (1.2–12.7) p=0.01].

Daily caloric intake of ≥80% resulted a protective factor against death in the Cox proportional-hazard regression model (b= –1.1, p=0.02).

Conclusions We have to increase the number of patients who receive ≥80% of daily caloric requirements and provide appropriate nutritional support during the first days of admission. Mortality rate remains high, due to the large number of patients receiving <80% of needed calories.

1464 MEDICAL RADIATION EXPOSURE IN CHILDREN DIAGNOSED WITH ACUTE LYMPHOBLASTIC LEUKEMIA FROM 1995–2010: A SINGLE INSTITUTION STUDY

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Objective This retrospective study examines a cohort of children diagnosed with acute lymphoblastic leukemia, examining exposure to medical radiation pre-conception, pre-natal or in early childhood. Exposure is documented through family interview. The study encompasses children diagnosed with A.L.L. and treated at the Children's Hospital of Pittsburgh over a fifteen year period.

Background Early exposure to medical radiation is one of the identified risks for childhood leukemias but documentation is difficult and mostly lacking in the United States experience. The author of this study developed a questionnaire that examines radiation exposures in either parent of to the child later diagnosed.

Methods Each family who was consented to be interviewed completed a five page questionnaire at clinic visit, through phone or mail. Whenever possible both parents were interviewed.

Results To date the author has been able to interview about 70% of children diagnosed from 2005–2010 however the interview rate for the period 1990–2005 is approximately at 5%. Among the families interviewed at least one exposure was commonly documented.

Conclusions Exposure to medical radiation for a child later diagnosed with A.L.L. may at occur at several critical junctures. Chest or sinus x-rays or CT of a parent pre-conception, particularly repeated scans have the possibility of DNA damage. Early childhood exposure through the diagnostic process (ruling out infection or trauma) may well contribute to this "perfect storm" in the still elusive causes of childhood A.L.L.

1465 CLINICAL CHARACTERISTICS AND TREATMENT RESULTS OF NEUROBLASTOMA PATIENTS

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Objective and method: The survival of the patients with neuroblastoma has improved in last few decades. But still it depends on various clinical and biological factors. To assess the clinical features and trends in survival, the data for 56 newly diagnosed patients between September 1996 and August 2011 from a single center were retrospectively analyzed.

Results Histopathologic subtypes were neuroblastoma (NBL) in 52 patients and ganglioneuroblastoma in 4 patients. The median age was 2.5 years and Male/Female ratio was 1.2/1. Primary tumor sites were abdomen, thorax, and neck with the frequency of 77.4%, 19% and 3.6% respectively. There were 21, 22, 9, 3.1 patients with stage 1, 2, 3, 4, 4S disease and their 5-year survival rates were 100%, 74%, 33%, 6.9%, and 59%, respectively In multivariate analysis, stage 4 disease (P<0.001), abdominal primary tumor site (P<0.001), NBL subtype in histopathology (P=0.001),and responsiveness to chemotherapy (P<0.001) were the determinants of poor prognosis.

Conclusions The survival rates in children with local disease are comparable with the results of developed countries; however, the results in children with advanced disease are still not satisfactory. To improve the outcome, especially in children with advanced disease, more effective chemotherapy regimens and molecular therapies should be investigated. Sharing the knowledge and capacity building to improve the treatment results in NBL are also critical for developing countries.

1466 THE ETIOLOGY OF PERIPHERAL LYMPHADENOPATHY IN CHILDREN

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Aim To determine the clinical and laboratory findings of peripheral lymphadenopathies.

Methods We evaluated 224 children who had been admitted to our pediatric clinic because of enlarged peripheral lymphadenopathy (LAP). The patients age, sex, localization, duration, size, mobility, extansion of lymph nodes, systemic symptoms, diagnostic laboratory and radiologic investigations and final diagnosis were determined. Features of lympadenopathy were compared between patients with malignant and benign diagnosis.

Results The ages of the patients ranged between 2 months and 16 years (median 7 years); 56% of the patients were male, Of the 186 (83%) patient had benign and 38 (17%) had malignant disorder. A total of 164 (73%) had localized, 60 (27%) had generalized LAP. The most frequent cause in the benign group was acute lymphadenitis where as hodgkin lymphoma was most frequent in the malignant group. Cervical region was the most common localization for benign or malign disorder. The mean age was higher in the malignant group. We determined acute LAP in 164 (73%) and choronic LAP in 60 (27%) patient. We didn't find differences between the benign and malignant groups according to size and mobility of nodes. Anemia, leukopenia trombocytopenia and organomegaly were significantly common in malignant group. Weight loss, night sweet and fatigue were more frequently associated symptoms in the malignant group. Excisional biopsies were performed to 50 (22.3%) patient.

Conclusion The following findings were important to alert the physician about the probability of a malign disorder: older age, supraclavicular lymphadenopathy, abdominal LAP, abnormal complete blood count and organomegaly.

1467 PEDIATRIC ONCOLOGY PATIENTS PRESENTING WITH SPINAL CORD COMPRESSION

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Spinal cord disease in children with known or suspected malignancy is an oncological emergency because it commonly implies malignant spinal cord compression. The records of 17 children with cancer presenting with spinal cord compression, encountered over

15 years, were reviewed. 11 patients were neuroblastoma, 3 were nonhodgkin lymphoma and the last were rhabdomyosarcoma. Male/female ratio was 1.2, the median age was 5.2 years, 9 patients went to surgery for tumour resection and laminectomy, others were treated with chemotherapy after biopsy. After treatment, 3 of severely affected 6 patients, who presented with paralysis, completely recovered neurologic function. 2 of 4 patients with moderate deficits, consisting of paresis and bowel/bladder dysfunction, completely recovered neurologic function. 7 children, who had mild symptoms comprised of paresis alone, fully recovered.

The frequency of complete neurologic recovery in children with intraspinal mass inversely correlated with the severity of the presenting neurologic deficits. The time passed between the first symptom and treatment was also important for neurologic recovery.

1468 ANALYSIS OF SURVIVIN GENE POLYMORPHISM AND SURVIVIN EXPRESSION IN WILMS TUMOURS IN SERBIAN CHILDREN

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Survivin, an apoptotic inhibitor, is overexpressed in various types of cancer. It has been shown that single nucleotide polymorphisms in the survivin gene promoter can modulate survivin expression and consequently influence the risk for some cancers. The aims of the present study were to:

a. analyze by means of PCR/RFLP, genotype and allele frequencies for the promoter –31 G/C polymorphism in the survivin gene of 59 Wilms tumour (WT) patients and 82 controls,
b. determine cytoplasmic and nuclear survivin expression in WTs using immunohistochemical methods.

The frequencies of alleles and genotypes were significantly different between patients and controls for the –31 G/C polymorphism. Individuals with CC and CG genotypes had significantly decreased risk of WT compared to GG individuals (OR 0.26, 95% CI 0.07–0.96; OR 0.30, 95% CI 0.15–0.60). A statistically significant difference in cytoplasmic survivin expression between lower and higher grades tumours has been detected as well (p=0.000), but without correlation with the genotypes. Our findings suggest that both survivin genotypes and survivin expression, though not showing direct relationship, represent relevant risk/prognostic markers for WT in Serbian population.

1469 20 YEARS CASE REVIEW ON HEPATOBLASTOMA IN NORTHERN IRELAND

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Aims To look at the incidence, management and outcome of Hepatoblastoma over 20 years period in Northern Ireland.
Methods A retrospective audit conducted in December 2011. Data collected from medical notes of all children diagnosed with Hepatoblastoma from Jan 1991 to Nov 2011 (14 patients), using an Audit proforma sheet.
Results *Age at presentation*: < 2 years-11 patients (79%), 2 to 15 years-3 patients (21%).

AFP level: High in all patients ranging from 12,589 to 3,140,000 KU/L.

Platelet count: Abnormally high-8 patients (57%), Normal-6 patients (43%). *LFT*: Deranged-11 patients (79%), Normal-3 patients(21%).

Clotting screen: Normal-11 patients (79%), Deranged-2 patients (15%), Not performed-1 patient (7%).

Staging: Pretext II-7 patients (51%), Pretext III-3 patients (21%), Pretext IV-3 patients (21%), Awaited-1 patient (7%).

Diagnosis: Non Metastatic Hepatoblastoma-Standard risk 8 patients (58%) and High risk 3 patients (21%),Metastatic Hepatoblastoma 3 patients (21%).

Pre-op chemotherapy: SIOPEL one-1 patient (7%),SIOPEL three-8 patients (57%), SIOPEL four-5 patients (36%).

Chemotherapy treatment: On time-11 patients (79%), Delayed-3 patients (21%).

Timing of surgery from initial diagnosis: 10 patients (70%) 2–4 months, 2 patients (15%) 4–5 months, 2 patients (15%) awaiting.

Type of Surgery: Orthotopic liver transplant-3 patients (21%), Partial hepatectomy-9 patients (64%), Awaiting-2 patients (15%).

Associated syndrome: Present (Beckwith-Wiedemann syndrome, Fanconi syndrome and 2 parents had familial polyposis coli)-4 patients (30%), Absent-10 patients (70%).

Post-op chemotherapy: SIOPEL one-1 patient (7%), SIOPEL three-7 patients (50%), SIOPEL four-3 patients (21%), Not applicable-1 patient (7%), Awaited-2 patients (15%).

Complications of chemotherapy: Yes (Hearing loss)-3 patients (21%), Nil-11 patients (79%).

Outcome: Remission-10 patients (70%), Died-2 patients (15%), Undergoing treatment-2 patients (15%).

Conclusions
Incidence Overall 0.02 per 100,000 versus 2 per 100,000 worldwide.
Platelet count: Abnormally high in 57% patients.
Survival rate: Overall 83.5% (10/12) versus 70% worldwide.

1470 ESTIMATION OF CIRCULATING SVCAM-1, SESELECTIN AND SIL2R IN CHILDREN WITH ACUTE LYMPHOBLASTIC LEUKEMIA

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Background Measurement of some circulating endothelial adhesion molecules and soluble receptors levels have been suggested as additional tools for assessment of patients with acute lymphoblastic leukemia (ALL). The aim of this study is to estimate sVCAM-1, sEselectin and sIL2R levels in the serum of cases with childhood acute lymphoblastic leukemia, comparing their levels before and after chemotherapy and comparing them to the control group. Moreover patients were categorised into responder and non-responder.
Patients and Method This study included ninety subjects attending National Cancer Institute; Twenty newly diagnosed patients with acute lymphoblastic leukemia (ALL) before starting chemotherapy, 40 patients with ALL after chemotherapy. 10 patients in partial remission and 20 apparently normal subjects within the same age and sex range, as a control group. Acute lymphoblastic leukemia diagnosis was made by bone marrow aspiration, cytochemistry and microscopic examination. Flowcytomer was used for immunophenotyping to confirm the diagnosis using monoclonal antibodies. SVCAM-1, sEselectin and sIL2R were estimated using enzyme-linked immunosorbent assay.
Results There were significant increases in the three estimated parameters in patients before chemotherapy as compared to after treatment as well as to the control group.
Conclusion The levels of some soluble circulating adhesion molecule and soluble receptors levels can be utilized for monitoring the disease activity of ALL and its response to treatment.