**Material and methods**

This 3-year cross-sectional study was performed in Dr. Sheikh Children’s Hospital in Mashhad on 50 children with ALL (n = 25) and NHL (n = 25). Half of them were received (n = 25) chemotherapy alone and half of them chemotherapy plus radiotherapy (n = 25). All children were in the remission phase. We assessed them by DEXA bone mineral densitometry (BMD) on the lumbar spine and femoral neck (hip). We also measured some bone biomarkers include calcium (Ca), phosphorus (P), parathyromone (PTH), alkaline phosphatase (ALP) in plasma. Results by age, height, sex and Body Mass Index (BMI) were adjusted with a special software.

**Results**

Mean age was 8.28 ± 3.93 years. There was no significant difference on bone biomarkers (Ca, P, ALP PTH) between ALL, NHL and also between the two treatment groups. Children with ALL had lower density at the hip and lumbar spine. (respectively p value < 0.001 and p value =0.018). A total of 50 patients, the hip BMD showed normal results in 3 patients (6%), in 14 patients (28%) osteopenia were seen and 33 patients (66%) had osteoporosis. In whom received radiotherapy plus chemotherapy, one patient had normal BMD and 24 patients (48% of total patients) at the hip and 22 patients (44%) at lumbar spine had decreased BMD. In contrast, in whom had only chemotherapy, 24 patients (48%) had osteoporosis at hip and 23 (46%) at lumbar spine. There was no significant difference in BMD between the sexes.

**Conclusion**

Given that 94% of children had abnormal bone density, Seem to pay more attention to the metabolic status and BMD in children with cancer can develop appropriate strategies to improve health and quality of their life.

**PO-0159 MANAGEMENT OF PATIENTS WITH ALL WHEN EXPOSED TO VZV**

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**Aims**

Investigate the management of patients with ALL when exposed to Varicella Zoster Virus.

**Method**

Retrospective study looking at all patients diagnosed with ALL between 2007–2011, a total of 60 patients. Each chart was looked at for any documented exposure to varicella and the management of the patient compared to standards set on local guidelines.

**Results**

38 patients in the audit. Age range was from 2 years to 15 years. 48 patients were tested at diagnosis leaving 10 patients with unknown Varicella status diagnosis.

24 patients reported exposure, 50% of these patient exposures were significant and required treatment. 19 of these were managed appropriately and 5 were not. 100% patients that were exposed and found not to be significant exposures did not receive treatment and therefore were managed appropriately. Of the patients that were exposed and not managed according to local guidance, one patient received IVIG 2/52 after a significant exposure when according to guidance they should have received oral aciclovir. Another patient did not have their status checked at diagnosis or when exposed. The remaining three patients did not have their immune status checked at diagnosis making their management inappropriate.

**Conclusion**

Overall the management of the patients who contacted the medical team to report exposure to Varicella were managed appropriately. Plan is to have a sticker on the front of patient notes with varicella status on diagnosis, exposure and results.
Children’s Hospital in Skopje. We explored the characteristics of I.E., together with the causative pathogens, the episodes of febrile neutropenia (FN), the length of antibiotic treatments and the treatments with G-CSF during intensive phases of treatment (Protocol I, M and II).

**Results** From 55 analysed records 24 (43.64%) were male and 31 (56.36%) were female. Mean age at diagnosis was 6.0 years (1.1–15.0). Majority of the patients 43 (78%) were under 10 years and 12 (22%) were over 10 years. All of them experienced 132, 52 and 73 I. E. with 2.4, 0.9, and 1.3 infections per patient during Protocol I, M and II respectively. Regarding to the pathogens 184 (71.5%) were bacterial (102, 30 and 52 in Protocol I, M and II), 45 (17.5%) were viral (20, 14 and 11 in Protocol I, M and II) and 28 (10.8%) were fungal (10, 8 and 10 in the three intensive phases respectively). There was a slight predominance of gram positive bacteria in Protocol I (Gram positive 42 (51.85%) versus gram negative 34 (41.97%)), and a very slight predominance of gram negative bacteria in Protocol II (Gram positive 16 (45.71%) versus Gram negative 18 (51.42%)).

The infections were treated with antibiotic treatment in average of 23.69, 11 and 15.05 days and the number of treatments with G-CSF were in average 7.22, 2.44 and 9.20 per patient respectively in Protocol I, M and II. The number of episodes of FN in these three phases was 16.4 (29.1%), 4 (7.3%) and 22 (40%).

**Summary/conclusion** Evaluation of the characteristics of I. E. presented that the majority of infectious events were observed in Protocol I and also the length of antibiotic treatment was longer in this phase. But the episodes of FN together with the treatment of G-CSF were in average 7.22, 2.44 and 9.20 per patient respectively in Protocol I, M and II. The majority of our patients are ALK positive and have high risk disease at presentation. 55% of children with high risk disease in our Centre were ALK positive and 5/19 had high risk disease. All the three children with ALK negative disease had progressive disease. All 3 had high risk disease and were ALK positive. The majority of our patients are ALK positive and have high risk disease at presentation. 55% of children with high risk disease are alive and well after a mean follow up of 17 months (range 8–93 months). The majority of our patients are ALK positive and have high risk disease at presentation. 55% of children with high risk disease are alive and well after a mean follow up of 17 months. The overall survival was 65% and event free survival 58% at the time of this analysis.