C. Important psychological stressors were: Feeling of exhaustion and burn out in fathers (59.5%) and mothers (85.1%).

Results of t test showed psychological and Related to child stressors were statistically significant for mothers and fathers, but those of social stressors were not significant.

Conclusions: Results showed that parents will be severely stressful after diagnosis of leukemia in their children and this will be more sever when the child is in pain, receives chemotherapy injections, becomes hospitalized. We think that nurses, physicians and other caregivers have to allocate more time to parents of leukemic children in order to recognize their current problems. Establishing societies are also essential for mental, psychological, and financial support.

4134 POSTER

Treatment of adolescents and young adults with T-cell acute lymphoblastic leukemia and lymphoblastic lymphoma according to the pediatric strategy for acute lymphoblastic leukemia – single center experience in Russia

S.V. Semochkin[1], S.S. Kulikova[1], O.A. Kudryavceva[1], V.V. Lunin[1], S.V. Minenko[1], V.V. Ptushkin[1]. [1]*Federal Clinical Center of Pediatric Hematology Oncology and Immunology, Adolescent and Adult Hematology, Moscow, Russian Federation*

Background: The current treatment of T-cell lymphoblastic lymphoma (T-LBL) is based on the therapeutic strategy for acute lymphoblastic leukemia (ALL). Pediatric schedules based Berlin-Frankfurt-Munster protocol and adult Hyper-CVAD regimen with high doses of methotrexate are approaches that are mainly used. The purpose of this study was to compare the outcomes in adolescents and young adults (AYA) with T-LBL versus T-ALL treated by ALL-like regimen without high doses of methotrexate.

Materials and Methods: From May 1998 to July 2008, 17 (44%) patients (pts) with T-LBL and 23 (56%) pts with T-ALL (including 7 in the outcome of T-LBL) were enrolled. 7 pts with T-LBL have relapses after previously received from 1 to 7 (median – 4.5) schedules of B-NHL-like therapy. 16 (40%) pts were treated with the national protocols ALL-MB 91/2002 and 24 (60%) pts – ALL-BFM 90 or NHL-BFM 90 for non-B NHL. In ALL-MB 91/2002 protocols the pts receive four drug induction with dexametasone 6 mg/m^2 daily for 36 days, daunorubicin 45 mg/m^2 ×2, vincristine 2 mg weekly ×5 and and intrathecal (IT) cytarabine and IT methotrexate and IT prednisolone weekly ×5. Consolidation therapy included L-asparaginase in a constant dose of 10000 ME/m^2 weekly ×18 and 6-merkaptopurine 50 mg/m^2 (100%) daily and methotrexate 30 mg/m^2 (100%) weekly with weekly doses adjusted according to WBC count. Central nervous system (CNS) irradiation for T-LBL is performed only for pts with CNS involvement at diagnosis. Maintenance was carried out up to 24 months. The BFM protocol called for comparison as an effective standard therapy.

Results: Median age at time of presentation was 18.1 (range 15−42) years for T-LBL and 19.5 (15−36) years for T-ALL. All pts (100%) with T-LBL had advanced (III-IV) stages. The presenting sites of primary disease included mediastinal mass in 13 (81%) T-LBL vs. 12 (48%) T-ALL cases ($p = 0.034$). The bone marrow was involved (<25% blasts) in 5 (32%) pts with T-LBL. CNS involvements were found in 3 (19%) vs. 4 (16%) pts ($p > 0.05$) respectively. 15 (94%) pts with T-LBL are in complete response (CR) vs. 21 (88%) pts with T-ALL ($p > 0.05$). 6-years EFS was 75 vs. 67% ($p > 0.05$). 6-years OS was 81 and 79% ($p > 0.05$). The median follow-up was 4.5 years. The outcome did not depend from the treatment protocol.

Conclusion: The outcome of T-LBL and T-ALL is comparable for AYA. Previous failures of CHOP-like schedules haven't an absolute disadvantage prognosis for further ALL-like treatment.

4135 POSTER

The experience of seven Romanian pediatric oncologic centers in the medical care of acute myeloid leukemia patients

C. Sava[1], L. Ritli[1], G. Miculschi[1], M. Serban[2], G. Popa[3], D. Baghiu[4], E. Gruber[5], P. Stancu[6], A. Apostol[7]. [1]*Clinical Children Hospital, Pediatric Oncology, Oradea, Romania;* [2]*3rd Pediatric Clinic, Pediatric Oncology, Timisoara, Romania;* [3]*2nd Pediatric Clinic, Pediatric Oncology, Cluj Napoca, Romania;* [4]*1st Pediatric Clinic, Pediatric Oncology, Targu Mures, Romania;* [5]*Oncologic Institute "Prof Dr Al Trestioreanu", Pediatric Oncology, Bucharest, Romania;* [6]*Pediatric Clinic, Pediatric Oncology, Craiova, Romania;* [7]*Pediatric Clinic, Pediatric Oncology, Constanta, Romania*

Background: Children diagnosed with AML represent a small proportion of assisted oncologic pediatric patients.

Materials and Methods: Multicentric estimation of AML children diagnosed and treated at the Universitary Centers of Oradea, Craiova, Timisoara, Bucuresti, Targu Mures, Cluj and Constanta during the periods 1998–2002 and 2003–2007. Data about sex, age, date of diagnosis, FAB morphologic types, treatment protocols and outcomes were recorded.

Results: 43 children (67% boys and 32% girls) were diagnosed during the years 1998–2002: 2.3% were under 1 year age, 23% were 1−4 years old, 23% were 5−9 years old, 27% were 10−14 years old and 23% were 15−18 years old. In the following 5 years 39 children with AML were diagnosed (58% boys and 42% girls); distribution by age groups was 10.2% under 1 year, 25% of the age groups 1−4, 5−9 or 10−14, the rest of 12% of the age group 15−18. During the years 1998–2002 58% of children had FAB M0-M2 morphology, 23% FAB M3 morphology, 14% FAB M4-M5 morphology and 4, 6% had M6, M7 or undifferentiated morphology (other); during the years 2003–2007 the percent of children diagnosed with FAB M0-M2 and M3 morphology decreased to 41% and 13% and the percent of children diagnosed with M4-M5 and other morphology increased to 35.8% and 10.2%. The most used Protocol was BFM 93 (45 patients) followed by BFM 98 (21 patients); only 2 patients were treated with BFM 95 and 1 with BFM 90; others protocols were used in 4 patients and in 7 children the protocols were not mentioned or the children were not treated. Of 43 cases diagnosed in the first period, 20 deceased (46, 4% of cases) and of 39 patients diagnosed in the second period of time 22 deceased (56% of cases); 80% and 68% of deaths respectively were registered among the children with unfavorable FAB histology or among the untreated children.

Conclusions:

1. 82 children with AML were diagnosed in the last 10 years in 7 pediatric oncologic centers.
2. The higher number of deaths during 2003–2007 cannot be explained only by the differences in age groups distribution or by FAB subtypes.
3. Improvement of diagnosis, classification and of treatment modalities are needed for better results.
4. Finally, these data cannot be generalized for the whole country but emphasize the need of further multi-center collaborative prospective and retrospective studies as well as the need of diagnosis, treatment and supportive care optimization in order to improve our patients outcomes.

Nursing oncology

Oral presentations (Mon, 21 Sep, 11:00−12:30)

Telecare and lifestyle interventions

4150 ORAL

Is telephone follow-up by specialist nurses a cost effective approach?

K. Beaver[1], W. Hollingworth[2], R. McDonald[3], G. Dunn[4], D. Tysver-Robinson[5], L. Thomson[6], A. Hindley[7], S. Susnerwala[7], K. Luker[1]. [1]*University of Manchester, School of Nursing Midwifery & Social Work, Manchester, United Kingdom;* [2]*University of Bristol, Department of Social Medicine, Bristol, United Kingdom;* [3]*University of Manchester, National Primary Care R&D Centre, Manchester, United Kingdom;* [4]*University of Manchester, Health Methodology Research Group, Manchester, United Kingdom;* [5]*Blackpool Wyre & Fylde Hospitals NHS Foundation Trust, Breast Unit, Blackpool, United Kingdom;* [6]*University Hospital of South Manchester NHS Foundation Trust, Breast Unit, Manchester, United Kingdom;* [7]*Royal Preston Hospital, Rosemere Cancer Centre, Preston, United Kingdom*

Background: This paper will report on the findings from an economic evaluation of traditional hospital follow-up versus telephone follow-up by specialist breast care nurses for patients treated for breast cancer in the United Kingdom (UK).

Materials and Methods: We conducted a cost minimisation analysis from a National Health Service (NHS) perspective using data from a randomised controlled trial that demonstrated equivalence between hospital and telephone follow-up in terms of psychological morbidity; 374 participants at low-moderate risk of recurrence were recruited to the study. The study was carried out at two hospitals in the North West of Engalnd. In a primary analysis we compared NHS resource use for routine follow-up (i.e. consultations, investigations and referrals) during a mean follow-up period of 24 months. Secondary analyses included patient and carer travel and productivity costs incurred and the NHS and personal social services costs of care in the minority of patients who developed a recurrence of their breast cancer.

Results: Participants in the telephone follow-up group had approximately 20% extra consultations (634 versus 524). Telephone consultations were of longer duration and conducted by senior nurses whereas hospital clinic

appointments were of shorter duration and often conducted by junior medical staff; this resulted in higher routine follow-up costs in the telephone follow-up group (mean difference £55, 95% bCI £29-£77). There were no significant differences in the costs of treating recurrence between groups. Participants receiving hospital follow-up had significantly higher travel and productivity costs (mean difference £47; 95% bCI £40-£55).
Conclusions: Telephone follow-up by specialist nurses may be a useful strategy for reducing the burden on busy hospital clinics and providing a quality service. Although patients and carers will have fewer costs with telephone follow-up, this approach will not necessarily lead to cost or salary savings for the health service.

4151 ORAL

Management of chemotherapy-related symptoms by telephone aftercare by an oncology nurse

M. Folsche[1]. *[1]Erasmus MC Daniel den Hoed Cancer Center, Internal Oncology, Rotterdam, The Netherlands*

Background: Practice research has shown that patients experience many chemotherapy related symptoms (CRS). These symptoms, which are sometimes experienced as severe, have an impact on the quality of life of the patient. The practice research also showed that patients barely got in touch with their medical specialist when they experienced (severe) symptoms and the interventions they applied were not always appropriate. As a result of a literature search, a pilot study of telephone aftercare by the oncology nurse was implemented, to be able to survey and manage CRS.
Materials and Methods: With telephone aftercare all clinical patients receiving chemotherapy will be called by an oncology nurse, 3 till 10 days after discharge from the hospital. For the purpose of surveying and managing CRS by the telephone aftercare a '*chemotherapy symptom list*' is being used. This symptom list contains 16 frequently occurring CRS. The oncology nurse makes the patient's symptoms objective by using the Common Toxicity Criteria of adverse events (CTC) version 3.0. Decision trees define per symptom which interventions at which CTC score should be applied. With a symptom scoring two or higher, the patient will be called back within 24−72 hours, or the patient will have to be directed to the treating medical specialist. In February 2009 oncology nurses of the Medical Oncology unit of the Erasmus MC-Daniel Rotterdam, the Netherlands, started with the pilot study of telephone aftercare for patients treated with chemotherapy.
Results: Until April 2009 twelve patients received telephone aftercare. In one case the patient was called back after 3 days and in two cases the treating medical specialist was consulted. All patients were very satisfied with this type of care. The oncology nurse took time to listen to and advise about symptoms, which may not score high when made objective, but may cause a severe subjective burden for the patient.
Conclusions: With telephone aftercare CRS seem to be better surveyed and managed. The oncology nurse seems to be the excellent person to make the subjective burden of symptoms objective, to provide advices and to direct the patient to the medical specialist when necessary.

4152 ORAL

Telephone delivered intervention for fatigue using motivational interviewing: an exploratory trial

E. Ream[1], G. Gargaro[2], A. Barsevick[3], A. Richardson[1]. *[1]King's College London, The Florence Nightingale School of Nursing and Midwifery, London, United Kingdom; [2]Guy's & St Thomas Foundation NHS Trust, Integrated Cancer Centre, London, United Kingdom; [3]Fox Chase Cancer Center, Division of Population Science, Philadelphia, USA*

Background: Fatigue affects 89−99% of people undergoing intravenous chemotherapy. Typically it manifests as treatment starts and increases over time. Psycho educational interventions have been developed to combat this symptom but most are delivered to individuals face to face. A structured telephone intervention (Beating Fatigue by Telephone) consisting of three telephone calls over 3 months, a patient handbook and diary was developed from a previous face-to-face programme. Motivational interviewing techniques were used to deliver information on managing fatigue, facilitate goal setting and motivate uptake of techniques to actively manage the symptom. Feasibility, acceptability and potential effect of the telephone intervention were explored in this study.
Materials and Methods: An exploratory trial using a randomised pre-test post-test control group design explored the magnitude of treatment effect. People (n = 40) undergoing chemotherapy for breast or colorectal caner or lymphoma experiencing fatigue were recruited. Fatigue intensity, fatigue distress, confidence in managing fatigue and anxiety and depression were measured pre and post intervention. Telephone interviews (n = 10) explored how the intervention impacted on management of fatigue and factors that affected it. Quantitative data were analysed descriptively. Qualitative data were subject to thematic analysis.
Results: There was a trend for reduced fatigue and associated distress, greater confidence in managing it and improved psychological wellbeing in people participating in the intervention. Telephone interviews confirmed the feasibility and acceptability of the telephone intervention. Participants easily built a rapport with the intervention nurse and regular contact with the nurse created a feeling of commitment and responsibility to engage with the programme and seek ways to manage fatigue better.
Conclusions: It is feasible to deliver a psycho educational intervention for fatigue management by telephone. Patients found telephone consultation convenient and motivating. Motivational interviewing appeared an important feature. Preliminary results are encouraging; however, a large trial of beating fatigue by telephone is required before its effectiveness can be confirmed.

4153 ORAL

Being a cancer patient doesn't mean it stops when you walk out of the hospital – patients and care managers perspectives of surviving cancer, living life telephone care management programme

A. Richardson[1], J. John[1], J. Armes[1], E. Ream[1]. *[1]Kings College London, Florence Nightingale School of Nursing and Midwifery, London, United Kingdom*

Background: Despite evidence that cancer survivors experience a range of unmet needs services remain poorly developed. Many questions remain about what form services should take, and who, where and how they should be delivered. This study sought to gain insight into, and understanding of, patients' and care managers' views of a newly established programme designed to respond to supportive care needs of patients who have recently completed treatment. The programme, entitled 'Surviving Cancer, Living Life' consists of telephone care management and at this stage of development involves patients with breast and prostate cancer. The programme has been developed and implemented through a partnership between Guy's and St Thomas' NHS Foundation Trust and Pfizer Health Solutions.
Material and Methods: This study utilised a qualitative approach. A purposeful sample of 22 patients and 3 care managers involved in delivery were interviewed. Interviews explored reactions to the programme, nature of relationships developed with care manager, and perceived impact and outcomes of telephone support. Interviews were recorded, transcribed verbatim and subject to Framework Analysis.
Results: Perceptions of the programme were unequivocally positive – it appeared to answer a deep felt need for support at a period when patients felt vulnerable. It represented a new and strikingly positive experience of healthcare in contrast to many of the inadequacies felt to be present in the traditional, routine approach to cancer care follow up. The programme met a need for emotional, practical and informational support and provided relational continuity and a point of access. It helped patients reframe their life and adjust to life after treatment. The form of delivery – based solely on telephone contact – was considered advantageous compared to face-to-face contact, particularly in terms of convenience, confidentiality and continuity.
Conclusions: The medium of the telephone appears to hold significant promise when designing services to meet the supportive care needs of patients as they adapt to life after finishing treatment.

4154 ORAL

Somato-psychosocial caring program to improve symptoms in cancer patients with stem cell transplantation (HSCT): protocol for a prospective non-randomized clinical trial

P. Jahn[1], P. Renz[1], I. Horn[2], M. Landenberger[1]. *[1]Martin-Luther-University Halle-Wittenberg Medical Faculty, Department for Health and Nursing Science, Haale/Saale, Germany; [2]University Hospital Halle (Saale), Head of Nursing Administration, Haale/Saale, Germany*

Background: Patients with hematopoietic stem cell transplantation (HSCT) suffer from a wide range of symptoms including muscositis (10–100%), nausea/emesis (30−60%), infections, social isolation (20−40%), mobility/activity deficits (15−20%), diarrhoe (30−70%) and infections (60−70%). After the stem cell transplantation (autonom or allogen) the patients need further long-term treatment under isolated conditions. This trial protocol is aimed to test the SCION (Self care improvement through oncology nursing)-HSCT program a multi-modular, somatic-psycho-social care intervention to improve self management in oncologic patients undergoing HSCT (funded by German Cancer Aid – 107498).
Methods: 84 HSCT patients University Hospital Halle (Saale) will participate in a non-randomized clinical trial. Patients are included if they are allogen or autolog transplanted, older than 14 years and signed