Transfusion medicine

B1891

EFFECT OF BLOOD DONATIONS ON IRON STORES OF BLOOD DONORS
Y Yaman1*, S Oztilk1, Y Oymak1, A Yayahri2, G Ozek1, O Carti1, A Tureki1, B Gunesi1, E Albudak1, B Demirag1, C Vergin1
1Pediatric hematology, Harran University Medical Faculty, Urfa, 2Pediatric hematology, Diyarbakir Children Hospital, Diyarbakir, Turkey

Background: A blood donor looses approximately about 200 to 250 mg of iron per donation which corresponds to a loss of four to ten percent of total iron. Loss of iron replaces quickly by mobilizing iron stores, followed by filling the iron stores if diet is adequate. The situation, however, is different for donors with high frequency of blood donations. For men who donating six or more times in the last two years; serum ferritin level has begun to decrease within time. In the absence of iron replacement this can lead to emptying of iron stores. We undertook this study to evaluate the effect of frequent blood donations on iron stores of regular male blood donors in Turkey.

Aims: To evaluate the effect of frequent blood donations on iron stores of blood donors in Turkey.

Methods: This study was planned prospectively with randomization of blood donors into two groups. The first group was 'frequent donation group' that comprised of donors who had donated one or two times in the last year and more than 6 times in the last two years. The second group was 'infrequent donation group' that comprised of donors who was donated one or two times in the last year. Serum hemoglobin, serum iron, total iron binding capacity, ferritin, peripheral blood smear and monthly income of all cases were evaluated. Results: The cases were stratified to study. 52/169 (30%) of cases were classified in 'frequent donation group'. Any of the cases in this group was not deferred from blood donation because of low haemoglobin level. The other 117 were classified in 'infrequent donation group'. There was no statistically significant differences in hemoglobin, serum iron, total iron binding capacity, mean corpuscular volume, peripheral blood smear findings and monthly income between two groups. Mean serum ferritin level was 45 ng/ml in frequent donation group and 55 ng/ml in infrequent donation group and these results were statistically significant (P<0,05).

Summary / Conclusion: Being a frequent blood donor is a condition that could lead to the development of iron deficiency in blood donors. Monitoring ferritin levels yearly for frequent blood donors and education of the donors about iron supplementation and diets are highly recommended.

B1892

CERTIFICATION AND EDUCATION PROGRAM. HOW TO IMPROVE QUALITY MARKERS OF TRANSFUSION IN HOSPITAL
J Fernandez1, F Berengué1, S Hinjoysa1
1Hematology, Hospital de Baza, Baza, Spain

Background: The regular assessment of blood bank activity allows us to know changes over time and influence clinical practice at point “weak” system. Actions taken in order to modify and standardize transfusions procols and transfusion indications in hospital practice are difficult and costly due to restricted resources and risk of changing meals.

Aims: We analyse de dates in order to know if certain measures are be able to change clinical practice and improve quality markers of transfusion therapy specially those related to the percentage of fresh frozen plasma transfusion

Methods: We examine whether the two case are carried out: 1.-active committee of transfusion with periodic update monthly statistics, 2.-transfusion guided, 3.- joint meetings with all hospital sections and 4.-a program of clinical medical education (CME) and 5.-Process of certification by an external agent (CAT)achieved in april 2010; have had a real impact on the consumption of blood products. We analyse the blood product transfused and quality markers specially those related with FFP transfusion.

Results: During the past 17 years we have transfused a total of 33.106 blood products (1947 per year). ther is clear trend in global transfusion and erythrocyte transfusion, but there is a significant decrease in the case of fresh frozen plasma during the last 17 years. We have transfused a total of 33.106 blood products in the last 17 years.

Summary / Conclusion: Being a frequent blood donor is a condition that could lead to the development of iron deficiency in blood donors. Monitoring ferritin levels yearly for frequent blood donors and education of the donors about iron supplementation and diets are highly recommended.

B1893

EVALUATION OF APOPTOSIS MARKER AT THE MEMBRANE SURFACE OF RESIDUAL LYMPHOCYTES IN GAMMA-IRRADIATED PLATELET CONCENTRATES
M Ogorodnikova1, T Zabotina1, A Borunov2, D Onufrievich1, E Ogorodnikova2, O Rukavitzin1, N. N. Burdenko Main Medical Clinical Hospital, 2N. N. Blochin Cancer Research Center, Moscow, Russian Federation

Background: Gamma irradiation (GI) of blood components, including platelet concentrates (PC), is used for inactivation of allogenic T-lymphocytes to prevent transfusion-associated graft-versus-host disease. The accepted dose of GI in Russia is 25 Gy. Damaging of T-lymphocytes DNA leads to their death by apoptosis (A).

Aims: The aim of this study was to evaluate apoptosis marker exposure at the allogenic lymphocytes membrane surface after gamma-irradiation of PC during the storage.

Methods: To perform investigation of residual lymphocytes, we used an experimental model of PC (not for clinical use) in the form of pooled random-donor PC.16 PC were obtained by the buffy coat method (five buffy coats were pooled) with centrifugation. We studied four groups of samples obtained from each PC. 16 samples after GI on Day 1 and 16 - on Day 5 of storage, 16 untreated samples on Day 1 and 16 - on Day 5 of storage. PC were irradiated with a gamma-source cesium-137 in dose of 25 Gray during the first twenty-four hours after collection. All samples were investigated by flow cytometry. Lymphocytes were identified by the binding of the PE Cy-7-conjugated anti-CD45 antibodies and lymphocytes apoptosis was measured by phos- phatidylserine (PS) exposure with FITC-labeled Annexin V. During the investiga- tion we analyzed more than 2000 events in the lymphocytes region, however the total number of all events ranged from 200000 to 600000. Further the number of lymphocytes was expressed as percentage of all analyzed events.

Results: The percentage of lymphocytes in untreated samples on Day 1 was 44±0,92% . Gamma-irradiation of PC was not lead to statistically significant changes (P=0,77) in the number of CD45+ cells on Day 1: the percent- age of CD45+ cells was 5±0,95%. The same number of CD45+ cells (P=0,26) was detected in untreated samples on Day 5: 5±0,95%. The investigation of gamma-irradiated samples stored for 5 days has shown significantly (p=0,04) reduced of lymphocytes: the percentage of CD45+ cells on Day 1 did not exceed 10,32±3,79%. The degree of Annexin V binding didn’t change significantly (p=0,94) after GI on Day 1 (10,34±3,95%). The percentage of apopto- ticle changed lymphocytes in untreated samples of PC remained unchanged (p=0,10) after 5 days of storage and PS exposure was detected on Day 1: 10,84±2,81% of CD45+ cells. PS externalization at the membrane surface of lymphocytes in gamma-irradiated PC was detected on 13,22±2,16% of CD45+ cells on Day 5. This level of PS expression was statistically significant increased in compared with Day 1 after GI of PC samples (p<0,007) and in compared with untreated lymphocytes on Day 5 on GI of PC (p=0,01) and on Day 1 (p=0,01). We observed that the externalization of PS did not change significantly.

Summary / Conclusion: There was no found destruction of residual lympho- cytes in untreated PC within 5 days of PC storage. While GI of PC with 25 Gy leads to reduction of lymphocytes by apoptosis on Day 5 of PC storage.

B1894

ACUTE EFFECTS OF BLOOD TRANSFUSION ON LEFT CARDIAC FUNCTION IN MAJOR PATIENTS
A Ayhan1*, Y Ayhan1, C Timur1, M Erguven1
1Pediatric Hematology, Medeniyet University Goztepe Education and Research Hospital, Istanbul, Turkey

Background: Cardiac complications are still the leading causes of mortality and morbidity in thalassemia major patients.

Aims: This study was planned to investigate acute effects of erythrocyte transfusion on left cardiac functions and to assess changes in serum levels of cardiac troponin I, creatine kinase, creatine kinase-MB due to transfusion in a group of patients with thalassemia major.

Methods: Twenty-five thalassemia major patients (14 male, 11 female) aged between 3 and 24 years (mean age 12±5,49 years) were included in the study. Patients with impaired left ventricular functions, any congenital or acquired heart disease were not included in the study. We recorded pre-transfusional hemo- globin, troponin I, cardiac troponin C and MB, and creatine kinase-MB levels which were studied from the blood obtained before transfusion. These measurements were repeated after 5 days as post-transfusional evaluation. Pre and post transfusional echocardiographic indices for left ventricular functions were compared.

Results: Written informed consent was obtained from adult patients or parents of child patients.

Results: Mean serum ferritin level at the time of the study was 1359.20±477.76 ng/ml (ranged between 560 and 2190 ng/ml). Mean pre-transfusional hemo-
about the importance of wearing the correct identification band all the time during blood transfusion. Pre- and posttransfusional EF, FS values of patients with ferritin levels <1000 ng/ml and those with serum ferritin levels ≥1000 ng/ml did not differ statistically (P>0.05).

There was no correlation between CK, CK-MB, cardiac troponin I and LVIDd, LVIDs, EF, FS (P>0.05). Hemoglobin concentration did not show any correlation with troponin, CK and CK-MB levels either.

Summary / Conclusion: The present study demonstrates that cardiac troponin I, creatinine kinase and creatine kinase-MB are not affected from hematological profile of thalassemia major patients. Echocardiographic measurements are not affected from acute changes in hemoglobin concentration in well-treated patients. Erythrocyte transfusion does not lead to any acute change in cardiac parameters.

B1895
AUDIT AND REAUDIT OF WEARING IDENTIFICATION WRISTBAND DURING BLOOD TRANSFUSION AT DUBAI THALASSEMIAS CENTER
K Belhoul 1, M Bakir 1
1Thalassemia centre, Dubai Health Authority, Dubai, United Arab Emirates

Background: Mistransfusion is the term used to describe an episode where “the wrong patient receives the wrong blood” and is considered by most authorities to be the leading cause of transfusion-related morbidity and mortality. Positive patient identification is essential at all stages of blood transfusion process to prevent such a serious adverse event. Dubai thalassemia centre daycare unit serves patients with hemoglobinopathy requiring chronic blood transfusion. Nearly 7,000 patient visits are received every year.

Aims: The purpose of this audit was threefold. Firstly, assess compliance to wearing the correct identification (I.D) wristband all the time during blood transfusion cycle. Secondly, identify the reasons for not wearing I.D wristband. Thirdly, evaluate the impact of process standardization and staff and patients’ education through re-auditing.

Methods: Five prospective audits were performed from 2007 to 2011 using the same methodology. Each audit was conducted prospectively on all patients admitted to thalassemia centre day care unit for blood transfusion over one month period. Patients were inspected twice daily for wearing I.D wristband that has the correct five core identifiers. The reasons for not wearing were recorded.

Results: In June 2007, 495 patients were subjected to auditing, 457 (92.32%) patients were wearing the correct I.D. wristband during blood transfusion, 1.7% refused to wear their I.D. wristband because they are known to all staffs, 1.4% clipped their band to the IV dressing, 1.0% was removed by the child patient himself accidentally, 0.2% had I.D. band allergy and the remaining 3.4% were others. Following staff and patients’ intensive education, 490 patients were subjected to re-auditing in Jan 2008 which resulted compliance improvement to 98%. 1.8% continued to refuse to wear I.D wristband because they are known to all staffs and 0.2% were allergic to the band. The same level of compliance to I.D wristband was maintained in the subsequent reaudits (2009, 2010 and 2011) and the reasons for not wearing the I.D. wristband remained the same. Our results were comparable to other international audits’ results (Graph 1).

Summary / Conclusion: Auditing and continuing staff and patients’ education about the importance of wearing the correct identification band all the time during blood transfusion are useful tools to improve compliance to identification guidelines.

B1896
POSTTRANSFUSION PLATELET RESPONSE IN HEMATOLOGICAL INPATIENTS
J Schuh 1*, J Carreira 2, C Gaspar 1, A Giol 1, A Tome 1, J Veiga 1
1Serviço de hematology, Hospital dos Capuchos, 2Serviço de Imuno-hemotapia, Hospital de São José, Lisboa, Portugal

Background: Thrombocytopenia is a common feature in hematologic oncological diseases, mainly in acute leukemia patients. Platelet transfusion (PT) may be used to prevent or treat associated hemorrhagic events and diminishes morbidity and mortality. Unfortunately, PT is not always effective on increasing the platelet counts, and the specific cause is identified in only a minority of cases.

Aims: To evaluate posttransfusion platelet response and its contributing factors.

Methods: From 13/04 to 13/06/2012, a prospective observational study of 354 consecutive transfusions in 50 inpatients (26 men; median age 58 years; acute myeloid leukemia as predominant pathology) was performed. Posttransfusion platelet response was evaluated using the 1 hour and 24 hour corrected count increment (CCI). Good responses were defined as CCI ≥ 7.500/μl or 24-h CCI ≥ 4.500/μl. Platelet quality, clinical status, laboratory results (renal and hepatic function, coagulation, complete blood count, LDH, PCR) and prescribed medications in the 24 hour interval before and after transfusion were evaluated.

Results: The median 1h and 24h-CCI were 6.500/μl (interquartile range, IQR, 2.632 - 11.985) and 2.146/μl (IQR -715 - 8.123), respectively; 44% of the PT had a good response after 1 hour, while only 39% after 24 hours. There was no significant correlation between 1h and 24h-CCI (rho 0.39). The platelets had acceptable quality concerning pH and lactate. The pretransfusion platelet count, (median 9.000/μl, IQR 6.000 - 15.000), did not influence the 1h-CCI. Male and older patients had significantly poorer responses. Also, the presence of fever and splenomegaly negatively affected the CCI. None of the laboratory results correlated with the CCI. Patients who were given piperacillin-tazobactam, potassium chloride, cyclophosphamide or omeprazol had significantly better responses, while etoposide, acetaminophen and bromazepam negatively influenced the posttransfusion response.

Summary / Conclusion: We found a low posttransfusional response among our hematological patients, which is in agreement with other similar institutions. The identification of manageable contributing factors for a deficient response may help optimizing the way we transfuse these patients, and it would probably improve efficacy and reduce costs. These factors should be further investigated in clinical trials.

B1897
CLINICAL EXPERIENCE OF GRANULOCYTE TRANSFUSION IN THE MANAGEMENT OF PEDIATRIC PATIENTS WITH FEBRILE NEUTROPENIA: A RETROSPECTIVE STUDY FROM A REFERENCE CENTER IN TURKEY
T Patroğlu 1*, M Karakucuk 1, E Unal 1, F Mutlu 1, B Isık 1, E Yılmaz 1, M Ozdemirli 1
1Pediatric Hematology, Erciyes University Medical Faculty, Kayseri, Turkey

Background: Despite intensive chemotherapy with improved supportive care for neutropenia contribute to the recent advances in treatment outcome in children with cancer. Febrile neutropenia is a still major risk factor for severe infections and mortality in malignancies. Granulocyte transfusion (GT) therapy is recommended to treat infections.

Aims: We retrospectively analyzed the clinical characteristics of patients with malignancies receiving GT therapy.

Methods: A total of 50 patients (30 boys, 20 girls) with a median age of 9 years (range: 2 months-21 years) were included in the study. Out of these 50 patients, 15 suffered from relapsed acute lymphoblastic leukemia, 11 acute myeloblastic leukemia, 10 aplastic anemia, 3 familial hemophagocytic lymphohistiocytosis, 6 lymphoma, 4 neuroblastoma and 1 germ cell tumor. All patients had persistent fever and prolonged neutropenia (>7 days). GT therapy was given because of fungal (13), viral (CMV 27, herpes virus 1) and bacterial (gram-negative1, gram-positive20) infections.

Results: All patients received a median of 5 transfusions (1-15) and appropriate antibacterial therapy combined with or without antifungal agents. G-CSF and addition to GT therapy was given to all patients except 8 with AML. The controlling of persistent fever and clinical signs of infection were achieved in all patients, but 12 patients (24 %) died due to subsequently developed uncontrolled infections.

Summary / Conclusion: A substantial proportion of severely ill pediatric patients with complicated febrile neutropenia benefited from GT therapy.
B1898
PLATELET EXPENDITURE IN HEMATOLOGY PATIENTS
F Rakia1, S Useini2, R Grubovic3, I Nikolska3, M Blagoevska1
1Blood collection and processing, 2Apheresis department, 3Immunohematology department, National Institute for Transfusion Medicine (NITM)- Skopje, Skopje, Macedonia, The Former Yugoslav Republic Of

Background: Thrombocytopenia is a major cause of morbidity and mortality in patients receiving chemotherapy for malignancy as well as for other specific hematologic disorders that also require frequent platelet (PLT) transfusions

Aims: To report on the expenditure of platelets (PLTs) aimed for the patients at the University Clinic of Hematology in relation to the total annual number of released PLTs for clinical use

Methods: A retrospective three - year survey (from January 2010 through December 2012) has been done, using data from the blood component production and apheresis department at the National Institute for Transfusion Medicine (NITM)- Skopje.

Results: The total annual number of whole blood units aimed for component preparation varied from 21 488 to 28 443 blood units. In 2010, 81.9% (12 666) of the produced PLTs by mainly the platelet- rich plasma (PRP) - method, were used for clinical use. 80.7% of these PLTs were intended for hematopoietic patients. In 2011 and 2012, 78.3% in 2010, 75.4% in 2011 and 55% of the collected PLTs were released in 2012. A top-up platelet transfusion was required post event.

Summary / Conclusion: The number of PLT transfusions for the purpose of treating hematopoietic patients has slightly decreased. This may be due to a more restrictive PLT transfusion policy. However, patients still remain most transfused ones when considering PLT transfusions. Replacing prophylactic transfusions by a therapeutic transfusion strategy following the latest guidelines as well as introducing new therapeutic modalities, the number of PLT transfusions may further be reduced.

B1899
USE OF RECOMBINANT FACTOR VIIa (rFVIIa) IN ACUTE LIFE THREATENING PRIMARY POSTPARTUM HAEMORRHAGE: A CASE REPORT
J Quigley 1, J Byrne1, M Diaz1, M Culliton1, K Murphy1, I Regan2, G Flannelly1
1Department of Pathology & Laboratory Medicine, The National Maternity Hospital, Dublin, 2Department of Pathology & Laboratory Medicine, Our Lady’s Children’s Hospital Crumlin, Dublin 12, Department of Obstetrics & Gynaecology, The National Maternity Hospital, Dublin, Ireland

Background: Primary Postpartum Haemorrhage (PPH), although falling in recent years, is one of the leading causes of maternal mortality and morbidity in the western world with a maternal mortality rate of 8.4% of all direct maternal deaths in the United Kingdom (CEMACH 2011). Massive PPH is defined as a cumulative blood loss >1,500ml of blood or ongoing severe bleeding. The treatment for massive PPH is a combination of blood and blood product transfusions by a therapeutic transfusion strategy following the latest guidelines as well as introducing new therapeutic modalities, the number of PLT transfusions may further be reduced.

Aims: To review the efficacy of rFVIIa post major post-partum haemorrhage (PPH) in acute life threatening primary postpartum haemorrhage (PPPH)

Methods: This was a retrospective individual case report. 39 year old, Para 3, Gravida 4 at the University Hospital in Kayseri, which is a city in the central Anatolia in Turkey. Planned caesarean section and tubal ligation planned for 38 weeks gestation. The patient then received recombinant Factor VIIa under Consents of the patient. Liveborn female infant, 3710g, Apgars 7 195. Maternal estimated blood loss was 3 l. The patient then received recombinant Factor VIIa under Consent of the patient. The blood bank was consulted who recommended a retransfusion strategy following the latest guidelines as well as introducing new therapeutic modalities.

Results: The patient then received recombinant Factor VIIa under Consent of the patient. The patient then received recombinant Factor VIIa under Consent of the patient. The patient then received recombinant Factor VIIa under Consent of the patient. The patient then received recombinant Factor VIIa under Consent of the patient.

Summary / Conclusion: The use of rFVIIa was effective in arresting an acute life threatening primary post partum haemorrhage with no thrombotic adverse effects seen it the aftermath. In the absence of randomized controlled trials on rFVIIa in obstetric haemorrhage, the use of independent case reports and review articles published lend support to the weak evidence that is currently available on the use of rFVIIa for obstetric haemorrhage. While some studies support the use of rFVIIa as a safe and efficacious treatment for massive obstetric haemorrhage, other studies do not support its routine use. Until randomized controlled trials take place in obstetrics with established protocols for its use, rFVIIa should only be prescribed by a Consultant Haematologist.

B1900
PHENOTYPE FREQUENCIES OF BLOOD GROUP SYSTEMS AND ALLOANTIBODIES TO RED BLOOD CELLS IN BLOOD RECEIVERS IN CENTRAL ANATOLIA OF TURKEY
Y Torun1*, L Kaynar3, C Karakukcu1, M Yay1, F Kumaz1, S Sivgin2, M Cetin2, A Podar1, A Gafou1
1Pediatric Hematology, Kayseri Education and Research Hospital, 2Hematology, Erciyes University, 3Biochemistry, Kayseri Education and Research Hospital, 4Blood Transfusion Center, Erciyes University, Kayseri, Turkey

Background: In routine practice, appropriate blood group for ABO and Rh blood group system should be given for a safe and effective erythrocyte transfusion.

Aims: To review the efficacy of rFVIIa post major post-partum haemorrhage (PPH) in acute life threatening primary postpartum haemorrhage (PPPH)

Methods: A total of 308 RBC antigens are now recognized by the International Society of Blood Transfusion (ISBT), 270 of which are clustered in 30 blood group systems, 9 of which (ABO, Rh, Kell, Kidd, Duffy, MNS, P, Lewis and Lutheran) are considered to be major blood group systems. Alloimmunization caused by the immunoegenic reactions is a serious problem especially in patients receiving multiple transfusions.

Allantibody data bank can be obtained by determining the antibody profile of the community by the screening of red cell antigen phenotype. Thus, potential development of alloimmunization reactions can be prevented in patients.

In literature, except for the frequency of ABO and Rh antigens, there is no study available about the frequency of red cell antigens in Turkey.

Aims: Routine erythrocyte antibody screening to prevent alloimmunization reactions in erythrocyte suspension recipients has been going on in Erciyes University in Kayseri, which is a city in the central Anatolia in Turkey, since January 2008. The present study is the first report detecting the frequencies of the ABO and Rh antigens and phenotypes of different blood groups in Kayseri, a city in middle Anatolia in Turkey.

Methods: A total of 48750 blood recipients typed for ABO, Rh system and other blood groups were retrieved from January 2009 to July 2011. The patients in whom antibodies were detected were also screened for the presence of autoantibodies. ABO group types and Rh specificities of the blood samples are screened and identified by DiaMed-ID Micro Typing System (Diamed AG, Switzerland) and gel centrifugation technique. The screened blood group antibodies in recipients were Kidd (Jk(a), Jk(b)), Kell (K, kp(a), kp(b)), Duffy (Fy(a), Fy(b)), MNS (M, N, s, s), Lewis (Le(a), Le(b)), P (P), Lutheran (Lu(a), Lu(b)) and Xg (Xg(a), Xg(b)).

Results: ID K typing was used in 48750 blood recipients typed for ABO, Rh system and other blood groups were retrieved from January 2009 to July 2011. The patients in whom antibodies were detected were also screened for the presence of autoantibodies. ABO group types and Rh specificities of the blood samples are screened and identified by DiaMed-ID Micro Typing System (Diamed AG, Switzerland) and gel centrifugation technique. The screened blood group antibodies in recipients were Kidd (Jk(a), Jk(b)), Kell (K, kp(a), kp(b)), Duffy (Fy(a), Fy(b)), MNS (M, N, s, s), Lewis (Le(a), Le(b)), P (P), Lutheran (Lu(a), Lu(b)) and Xg (Xg(a), Xg(b)).

Conclusions: Alloimmunization causes multiple transfusions. Alloimmunization is a major problem in blood banking. In patients undergoing chronic transfusion, if hemoglobin levels drop suddenly and need for transfusion frequency increases without any other cause, the probability of multiple antibodies should be considered.

C O R R E L A T I O N  B E T W E E N  A B O  B L O O D  T Y P E A N D  T H E S I T E  O F C A N -
vated plasma markers of inflammation in these patients suggested a link between chronic inflammation, A blood type and pancreatic cancer, according to which, blood group antigens may alter the systemic inflammatory response that leads to this specific type of neoplasia.

**Aims:** To check the distribution of the ABO blood type among the Greek cancer patients and detect the existence of any correlation between ABO and the site of cancer.

**Methods:** From the archives of the Blood Bank Department in our Oncology Hospital we had recorded 1329 cases of cancer patients, their ABO blood type and the site of cancer. The ABO distribution was studied in the whole cancer-population and also among various sites of cancer-categories, and it was compared to the distribution in the general Greek population. The results had revealed the already known association between pancreatic cancer and A blood type, and also a newly mentioned association between respiratory cancer and non-B blood-type. Now, having expanded further the database (1518 cases), we are particularly focusing in the prevalence of A and non-B blood type among the pancreatic and the respiratory cancer patients respectively, by comparing the A and non-A and the B and non-B distribution in the general Greek population to the distributions in the pancreatic cancer group and the respiratory cancer group respectively (x²-test).

**Results:** The ABO distribution in the general Greek population, in the whole cancer population and in each cancer site-oriented group studied, as well as the levels of statistic significance testing the O versus non-O prevalence in each site of cancer, are shown in table 1. The results regarding the A/non-A distribution among the pancreatic cancer patients and the B/non-B distribution among the respiratory cancer patients are shown in table 2 (the calculations in these two categories were done on the updated data).

**Summary / Conclusion:** 1. The ABO distribution among cancer patients is not different when compared to that in the general Greek population and this is in accordance to the national bibliography. 2. Blood group A is associated with pancreatic cancer, according to the national bibliography. 3. Non-B blood group is associated with respiratory cancer.

Gathering further data, especially on patients with respiratory cancer, would enforce the level of statistic significance of these results

---

**B1903**

**COMBINATION OF DEFERASIROX AND DEFEROXAMINE IN MANAGEMENT OF IRON OVERLOAD IN MYELODYSPLASTIC SYNDROMES (MDS): AN UPDATE IN A HEPATOPATIC PATIENT**

C Cerchiome 1, G Cerciello 1, R Delta Pepa 1, N Pugliese 1, L Marano 1, O Vitalianno 1, M Matarazz 1, F Pane 1, F Alfinito 1

1Hematology, Internal Medicine, AOU “Federico II”, Napoli, Italy

**Background:** Although other treatments are now available, the standard treatment for many MDS patients remains supportive care. Most MDS patients eventually become red blood cell (RBC) transfusion dependent, risking iron overload, which may result in cardiac, hepatic, and endocrine dysfunction.

**Aims:** Iron-chelation is recommended in guidelines in MDS when there is at least an evidence of iron overload: elevated serum ferritin, iron related organ dysfunction, or chronic RBC transfusions. Deferasirox is a well tolerated oral iron chelator drug that promises relevant benefits but, because of its potential hepatotoxicity, it is usually not recommended for patient with known hepatic diseases.

**Methods:** A 62-year-old man, with Refractory Anaemia, affected by HCV positive cirrhosis, started recombinant Erythropoietin therapy without results, and then he went in RBC transfusion program, with 2 blood package/month. At a ferritin serum concentration 700 ng/ml, iron chelation therapy with deferasirox was started in consideration of pre-existing hepatic disease. The patient was absolutely not compliant to this therapy, and transfusion need increased until to 2 blood package/week while serum ferritin concentration was, after 12 months, more than 6000 ng/ml. Since high levels of ferritin correlate with a dangerous condition for hepatic cells, deferasirox was started to that in the patient had to receive 2 RBC package/week and, after two years of combined therapy, serum ferritin concentration was at a stable level under 3000 ng/ml. During treatment, a regular monitoring of hepatic, renal and cardiac functions was performed and there was no alteration. Then, the patient, after a 4-years period of iron-chelation therapy and related iron-chelation therapy, died from septic shock.

**Summary / Conclusion:** In conclusion, management of iron overload with deferasirox and deferoxamine as combined therapy can be considered as a safe and useful therapeutic choice in critical transfusion-dependent iron overload in MDS patients with pre-existing hepatic disease, even if these preliminary observations need to be validated by controlled studies enrolling larger numbers of patients.