KIR by PCR. Mathematical model was developed for evaluation the balance of activating and inhibitory rp as an index of cytotoxic activity (**ICA**) of mature NK. To select donor (dn) for KIR-AI we investigate med 3 samples (range 3-8) BM/UCB. The indication - salvage therapy, ECOG>3. BM-dn with low ICA were excluded. Lymphodepletion included CyFlu (up to 3 d), both BM (12 pts) and UCB (11 pts). **Results:** NK UCB ranged 5-56% (med 16) of lymphocytes. No any differences between NK -UCB and BM (similar to PB). For dn and pts no ICA differences by sex and age, ICA depend on depression and virus. For pts no ICA difference by type of cancer, germinal mutations, but strong correlation with nearest outcome of cancer. FU med 9 mo (2-52). OS (11 pts, 14 UCB-transfusions) med 6 mo (2+ -10), comparable to BM med 8 mo (2-48). AI outcomes depend on the intensity of lymphodepletion and ICA UCB/BM. **Conclusion:** Considering acceptable toxicity of lymphodepletion and good AI tolerability, including poor pts, the indications for cellular anticancer treatment could be expanded. We start pilot using UCB for KIR-AI for overcome chemoresistance and to achieve complete remission of disease after finishing anticancer treatment of solid tumors and for MRD-eradication in hematology. Additional undeniable advantage of UCB KIR-AI is quick availability of UCB from a KIR-typed UCB register.

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OP 08

HUMORAL IMMUNITY RESPONSES AFTER VACCINATION FOR HEPATITIS B VIRUS IN AUTOGRAFTED PATIENTS: A SINGLE CENTER EXPERIENCE

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Objective: The effectiveness of vaccinations post hematopoietic stem cell transplantation (HSCT), is a reliable marker for immune system's functionality assessment. In autologous HSCT (AHSCT) setting, the general aspect is that the immune system recovers quite soon and patients (pts) are considered to be immunocompetent in a period of approximately 3-6 months post AHSCT. We evaluated the hepatitis B virus (HBV) vaccination responses in autografted pts who were in remission and off chemotherapy post AHSCT. **Methodology:** 27 autografted pts aged 51,6 (22-67) ys, who had antiHbs titers <10 IU/ml before AHSCT and at the time of vaccination, were studied. After a successful engraftment the median absolute lymphocytes count at +3 months was 1740(450-4090)/mm^3. In 4,3(0,6–8,5) ys post AHSCT, 3 doses of recombinant HBV vaccine were given monthly. The response rates for pts who completed 3 vaccine doses, compared with an internal group of healthy individuals, vaccinated in the same period with the same product. **Results:** After the 1st, 2nd and 3rd dose the response rates in the study group were 11%, 81% and 88% respectively. No factor statistically significantly influenced the achievement of protective antiHbs titers. The responses were lower as compared to product's efficacy profile (19%, 86% and 100% after the 1st, 2nd and 3rd dose respectively), while in the comparative analysis with the internal control group, a trend for inferior responses in autografted pts was also noticed (88% vs 100%, p=0,07). **Conclusion:** This study, in a relatively homogenous group of pts, to our knowledge, is the only one that directly compares the HBV vaccine responses in autografted pts with healthy individuals. Although vaccination was offered late post AHSCT, the responses were lower compared to healthy individuals, indicating a possible long lasting immune impairment post AHSCT highlighting the necessity of prolonged surveillance and intensified vaccination programs for autografted pts.

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OP 09

ANTIBODY RESPONSES AND SAFETY OF THE COMMERCIALLY AVAILABLE VACCINES AGAINST SARS-COV-2 VIRUS IN ALLOGRAFTED PATIENTS: REAL WORLD DATA FROM A SINGLE CENTER

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Objective: Patients (pts) who have undergone allogeneic stem cell transplantation (alloSCT) are at high-risk for life-threating complications post SARS-CoV-2 infection, and the mortality rates has been reported of approximately 30-35%. The currently available vaccines proved their effectiveness in the general population by reducing the severity of the COVID-19 infection however, scant data exist regarding the safety and efficacy of the commercially available vaccines in allografted pts. **Methodology:** After a median of 2,7 (0,3-6,7) ys post alloSCT, 20 pts received within a median of 42 days, 2 vaccines of either Pfizer (n=17) or combinations of Pfizer with Moderna (n=2) or AstraZeneca (n=1). Off immunosuppression without evidence of active GvHD were 14 pts, 1 was only on Cyclosporine (CSP) while 5 were on steroids plus CSP or MMF or Ibrutinib for GvHD treatment. Automated commercial chemiluminescence immunoassay (CLIA) against spike (S1/

S2) protein was used for antibody responses detection. **Results:** During vaccination program no side effect grade ≥3 (including allergy, thrombosis, heart dysfunction or laboratory abnormalities) was reported. The commonest complains were fatigue (20%), bony pain (10%) and fever <38.5 oC (10%). Satisfactory antibody responses were observed in 66% and 95% of pts after the 1st and 2nd dose respectively. Importantly, active GvHD and intensive immunosuppression, did not negatively affect the antibody responses. None of the vaccinated pts developed COVID infection **Conclusion:** Our retrospective study although with small number of patients and with short term follow-up, in agreement with others, confirms that the current commercially available vaccines against SARS-CoV-2 are safe and highly effective in producing effective humoral responses in allografted patients. Prospective studies with longer follow-up are needed to elucidate the proper timing and the number of necessary doses for a safe and effective approach in preventing severe COVID-19 infection

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OTHER DISEASES

OP 10

THE MENTAL HEALTH STATUS OF INPATIENTS WITH NEWLY DIAGNOSED HEMATOLOGICAL CANCER DURING THE COVID-19 PANDEMIC

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Objective: There is limited data in the literature on the mental health of newly diagnosed hematological cancer (HC) patients in COVID-19 pandemic. This study evaluates the mental health statuses of HC inpatients diagnosed during the COVID-19 pandemic in comparison to the statuses of patients diagnosed with HC before the pandemic. **Methodology:** A cross-sectional survey collected the mental health measurements of 77 inpatients with HC between March and May 2021. The levels of depression, generalized anxiety, distress, sleep disorder, health anxiety, trait anxiety, coronaphobia, and resilience in HC patients newly diagnosed during the pandemic (NDHC) (n=38) and HC patients diagnosed before the pandemic (BPHC) (n=39) were compared. The relationships between predictive factors and cancer patients' mental health statuses were evaluated. **Results:** Depression (63.2% vs. 35.9%, p=0.017) and sleep disorder (67.8% vs. 38.5, p=0.016) were significantly higher, while generalized anxiety (57.9% vs. 38.5%, p=0.088) and distress (52.6% vs. 33.3%, p=0.087) were higher in NDHC.Health anxiety was more common in BPHC (53.8% vs. 31.6%, p=0.048).Among NDHC, women had more anxiety symptoms than men (76.5% vs. 42.9%, p=0.037).Diagnosing newly increased the risk of severity of depression and sleep disorders, bu decreased the risk of health anxiety. **Conclusion:** Our data indicate that patients with HC are vulnerable to mental health problems in the COVID-19 pandemic. This vulnerability is higher in newly diagnosed HC patients than in patients diagnosed before the pandemic. These findings may help develop interventions that reduce the vulnerability to adverse psychological effects by identifying risk factors for HC patients under pandemic conditions.

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OP 11

CORONAVIRUS ANXIETY LEVEL AND COVID 19 VACCINE ATTITUDE AMONG HEMATOLOGICAL MALIGNANCY PATIENTS

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Objective: The COVID-19 vaccine is the most essential tool for altering the pandemic's trajectory. The pandemic's control is complicated by society's unwillingness to vaccination. The aim of this study was to evaluate the attitudes of patients with hematological malignancies towards vaccination and to determine the relationships between vaccination hesitancy and patient characteristics. The secondary aim was to identify the pandemic-related anxiety level of this patient group and to investigate whether anxiety influences vaccination propensity. **Methodology:** This cross-sectional study was conducted with hematological malignancy patients at Hematology Clinic of the Erciyes University Hospital from Kayseri, Turkey, from 1 May 2021 to 1 December 2021. Patients who (1) were 18 years old or older, (2) voluntarily agreed to take part survey, and (3) could understand and perform the questionnaire met the inclusion criteria. 165 patients with hematological malignancies were included. The questionnaire consisted of three parts. The patients' sociodemographic characteristics, such as age, gender, diagnosis, disease and HSCT status, education level, marital status, location of residence were all asked about in the first section of the study. COVID-19 anxiety situation was evaluated with the Coronavirus Anxiety Scale (CAS). COVID- 19 vaccine attitude was evaluated with the Vaccine Attitudes Review (VAX) Scale. **Results:** The median age was 48 (18 - 86) years, 61 (37%) of whom were female. Most of the participants (37%) had been diagnosed with acute myeloid leukemia and were undergoing chemotherapy. In addition, 21% of patients reported having comorbidities. At the time of the survey, 70% of patients had not been infected with COVID-19, whereas 44% had been vaccinated. The mean CAS score was 2.42 (0 - 17). There were 22 (13%) participants with a mean CAS score of ≥9. Half of the participants had a CAS