Results: Analysis of the data obtained has shown that, during the reporting period the average annual incidence of MPN was 1.84 per 100,000 inhabitants, including 2.1 for male and 1.64 for female. Analysis of incidence rates of MPN in relation to sex and age in the period under study revealed high rates in patients in groups 65–74 (8.3) and 55–64 (5.12 per 100 thousand years), respectively. According to the data obtained in the group of patients with MPN, the high annual average incidence rates are noted in PMF (1.09 in 2018) and PV (0.89 in 2016), the lowest for ET (0.7 in 2016) per 100,000 population, respectively. In comparing our data to those obtained for 1966–1971 and 1998–2004 periods, one may detect a statistically significant increase in the total incidence of PMF and PV ($p < 0.001$).

Conclusion: Analysis of the incidence rate in MPNs adjusted for age and gender shown prevalence in group 65–74 (8.3) and in group 55–64 (5.13) per 100,000 inhabitants. The peak of incidence rate for both males and females was the age 65–74 and the male female incidence ratio in this age group was 11.3:6.2. The increasing incidence rate in MPNs in Armenia depends on the improvement of laboratory diagnosis. Thrombotic complications are observed in patients with MPN in 45.3% of cases. In most cases, thrombosis is the first clinical symptom of a myeloproliferative disease, which determines the need for the introduction into clinical practice of molecular genetic testing methods among patients with thrombosis, an increase in blood levels, splenomegaly for the early diagnosis of clonal hematopoiesis and the use of a targeted drug.

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LYMPHOMA

OP 06

The importance of next generation sequence in patients with diffuse large B cell lymphoma

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Objective: Diffuse large B cell lymphomas (DLBCL) are clinically and morphologically heterogen diseases. There are more than 150 gene mutations in DLBCL. Mutations effect disase survey by histon modification, cell proliferation, cell metabolism and differentiation, apoptosis, response to DNA injury, B cell and Toll-like receptor signalization, angiogenesis and immun regulation in patients with DLBCL. We aim to search gene expression frequency, the relation of mutative genes expression with treatment response and survey in patients with DLBCL.

Methodology: The DNAs of patients with DLBCL obtained from formalin fixed paraffin embedded biopsy material in Pathology Department as retrospectively. Illumina genom analyzer and qiaqen method for bioinformatic software was used. Total 141 gene were evaluated. SPSS 17.0 were used for statistically analyses. We used Shapiro-Wilk test relevance for distrubition. The results were described as a number, frequency, and percentage. The chi-squared and Student's *T*, Mann–Whitney *U* tests were used for the analysis. The results were assessed at a 95% confidence interval and a *p*-value of less than 0.05 was accepted as significant.

Results: We found mutation in 13 of 141 genes. The pathological genes were ANKRD26, BRCA1, BRCA2, EZH2, KMT2C, MSH6, MYC, MYD88, NF1, NOTCH1, PMS2, PTEN and WRN. There were relations among ANKRD26, BRCA2, MYD88, NOTCH1 genes with prognosis. The remission rates in patients with ANKRD26, BRCA2, MYD88, NOTCH1 were 33.3% ($p < 0.05$), 52.4% ($p < 0.05$), 0% ($p < 0.05$), 37.5% ($p > 0.05$), respectively. The relapse rates in patients with ANKRD26, BRCA2, MYD88, NOTCH1 gene mutation were 58.3% ($p < 0.05$), 38.1% ($p = 0.37$), 66.7% ($p = 0.23$), 62.5% ($p = 0.03$), respectively.

Conclusion: ANKRD26, BRCA2, MYD88, NOTCH1 genes effect prognosis in patients with DLBCL. Aggressive treatment can be useful in patients DLBCL that have ANKRD26, BRCA2, MYD88, NOTCH1 gene mutations.

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OP 07

Real experience of brentuximab vedotin for cutaneous T cell lymphomas

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Objective: Patients with relapsed/refractory CD30 positive lymphomas have relatively poor outcomes, with reported 3–5-year overall survival (OS) of only 30–50%. Mycosis fungoides (MF) and its leukemic variant, Sézary syndrome (SS), are the most common subtypes of cutaneous T cell lymphoma (CTCL). Brentuximab vedotin (BV) is an antibody-drug conjugate linking a CD30 antibody to four molecules of the microtubule inhibitor monomethyl auristatin E (MMAE), which has multiple proposed mechanisms of action BV is FDA-approved for relapsed Hodgkin's lymphoma (HL) and systemic anaplastic large cell lymphoma (sALCL). National Comprehensive Cancer Network guidelines have already incorporated BV as a primary treatment option in multifocal primary cutaneous anaplastic large cell lypmhoma (pcALCL) and MF.

Methodology: Between January 2018 and June 2020, 10 patients with CD30+ cutaneous T cell lymphoma (MF and pcALCL) who were treated with BV are evaluated in our study. One cycle of BV typically involves 1.8 mg/kg being administered intravenously once every 3 weeks. We detail our experience with BV and the position of BV in our treatment methods for CTCL.

Results: Ten patients (6 male and 4 female) have received BV in our center. Median age at time of commencing brentuximab was 54.5 years (range 34–72 years), 80% of patients had experienced at least one prior line of chemotherapy (range 0–2). Six patients with Mycosis Fungoides (MF) and large cell transformation (LCT) and one with high burden Sezary

Syndrome (SS) and 3 patients with multifocal primary cutaneous anaplastic large cell lymphoma (pcALCL). The median follow-up was 21.5 (range: 4–60) months from the date of diagnosis. Adverse events were grade 1–2 peripheral neuropathy (40%) and gastro-intestinal disturbances (10%). Peripheral neuropathy resolved by discontinuation of therapy. All there pcALCL patients achieved complete remission after 5 cycle of BV. One patient with MF had progressive disease due to nodal involvement and one died of fungal pneumonia after 2 cycles of BV and could not evaluated for disease response.

Conclusion: BV has proven efficacy in both CD30- expressing MF, pcALCL. Same as previous studies, CR could be achieved more frequently in pcALCL than MF in our study. BV is found significantly higher response rates compared to traditional agents like methotrexate or bexarotene and 75% of patients had underwent these therapies before BV. In summary, BV is a promising agent for relapsed refractory CTCL patients with durable remission.

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OP 08

The prognostic impact of comorbidity, nutritional and performance status on patients with diffuse large B cell lymphoma

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Objective: The aim of the study was to investigate the impact of nutritional status, comorbidity and performance status on patients with diffuse large B cell lymphoma (DLBCL).

Methodology: A retrospective study was conducted on DLBCL patients who was diagnosed in our centre between 2009–2018. The study included a total of 112 patients. Demographic and disease characteristics and labaratory test results were recorded. Overall and progression free survival were measured from these data. The methods for the assessments are Charlson comorbidity index for comorbidity, albumin level for nutritional status and ECOG score for performance status.

Results: The average age of the patients was found to be 62.63 ± 15.16 years. The ECOG score of 65 patients (69.1%) is in the range of 0–1. The mean follow-up time of the patients was determined to be 25.24 ± 25.11 (months), and at the end of the follow-up period, 64 patients (57.1%) were found to be alive. The median of 5-year PFS was 13.2 months, and the 5-year OS was 59.8%. Those with CCI-A score <4 and those with ≥4 were compared. PFS, OS and 5-year OS values of those with CCI-A >4 were found to be significantly lower than those with CCI-A score ≤4 ($p < 0.05$). As a result of the Cox-Regression (Backward: LR method) analysis, ECOG and albumin values were found to be independent risk factors for both OS and PFS ($p < 0.05$).

Conclusion: This study demonstrated that CCI-A, ECOG and nutritional status are independent prognostic markers for DLBCL patients. Initial evaluation of these patients should include all of these parameters which are easily available at the time of diagnosis.

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OP 09

Can sarcopenia be a risk factor for bleomycin toxicity?

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Objective: Hodgkin Lymphoma (HL) constitutes 10 percent of lymphomas. It is one of the most curable malignancies with a response rate of around 85%. Most recent guidelines recommend ABVD (adriamycin, bleomycin, vinblastine, dacarbazine) regimen in the first-line treatment of classical HL. Epidemiological studies showed that around 20% of patients treated with bleomycin developed bleomycin pulmonary toxicity (BPT). Risk factors for BPT are under investigation by most lymphoma working groups. Some studies suggested that bleomycin dose could be a risk factor for BPT. Sarcopenia is defined as a syndrome characterized by the loss of muscle mass, strength, and performance. Recent studies suggested that psoas muscle indexes could be used to identify sarcopenic patients. We hypothesized that the same bleomycin dose especially in patients with muscle loss due to the subsequent chemotherapy cycles might be a risk factor BPT.

Methodology: A total of 48 patients with newly diagnosed classical HL were included in the study. All of the patients received at least 2 cycles of a standard dose of ABVD chemotherapy. Sarcopenia was assessed using the psoas muscle index (PMI), which was calculated using values measured on PET/CT images before ABVD chemotherapy and the following formula: cross-sectional area of the bilateral psoas muscle/height^2. Patients were divided into two groups according to the PMI: the sarcopenia group (≤443 mm^2/m^2 for men and ≤326 mm^2/m^2 for women) and the non-sarcopenia group (>443 mm^2/m^2 for men and >326mm^2/m^2 for women). PMI was calculated both prior to the initial chemotherapy and after 2 cycles of ABVD. chemotherapy-related complications such as bleomycin toxicity, hospitalizations, the time course of neutropenia, and hospitalization due to the neutropenic fevers were recorded. Chi-square test and Mann Whitney *U* tests were used for statistical analyses. A *p*-value less than 0.05 were considered as statistically significant.

Results: 29 (60.4%) of the patients were male. 13 of 48 patients (27%) developed BPT after starting chemotherapy. Body Mass Index (BMI) status of these patients with BPT did not change after 2 cycles of ABVD. Mean psoas indexes prior to chemotherapy were 581.36[PLUSMN]188.08 in patients who did not have BPT and 465.29[PLUSMN]149.64 in patients with BPT ($p = 0.052$). Mean psoas indexes after 2 cycles of ABVD were 597.43[PLUSMN]207.38 in patients who did not have BPT and 400.46[PLUSMN]109.21 ($p < 0.001$). 11 of 13 patients with BPT had sarcopenia after 2 cycles of ABVD. There were no statistically significant association with stage, mortality status, time of neutropenia, relapsed disease, neutropenic fever episodes, and psoas muscle indexes.