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**Objective:** To compare with IPI the usefulness of new prognostic scores in patients with peripheral T-cell lymphoma (PTCL) from a single institution. **Methodology:** Sixty patients (30 male/30 female) with PTCL [anaplastic large-cell lymphoma (ALCL) 18, PTCL not otherwise specified 32 and other 10]. International Prognostic Index (IPI), Modified Glasgow Prognostic Score (mGPS), Geriatric Nutritional Risk Index (GNRI), The combined index of hemoglobin, albumin, lymphocyte, and platelet (HALP), Platelet to Lymphocyte Ratio (PLR), Neutrophil to Lymphocyte Ratio (NLR), albumin/globulin ratio(A/G), Prognostic nutritional index(PNI) were calculated as in the original references. **Results:** mGPS,GNRI,HALP, PLR,NLR,A/G and PNI have not significance to predict overall survival in patients with peripheral T-cell lymphoma(Table-1). **Conclusions:** IPI is still superior from all prognostic scores (mGPS,GNRI,HALP,PLR,NLR,A/G and PNI) to predict overall survival.

Variables in the Equation

Table-1

	B	SE	Wald	df	Sig.	Exp(B)	95,0% CI for Exp(B)	
							Lower	Upper
IPI	0,598	0,167	12,75	1	0	1,818	1,31	2,525
mGPS	0,001	0,244	0	1	0,996	1,001	0,621	1,614
GNRI	0,014	0,017	0,738	1	0,39	1,014	0,982	1,048
HALP	0,036	0,275	0,017	1	0,897	0,965	0,563	1,655
PLR	0	0,001	0,166	1	0,684	1	0,998	1,003
NLR	0,035	0,046	0,599	1	0,439	1,036	0,947	1,133
A/G	0,399	0,463	0,74	1	0,389	0,671	0,271	1,663
PNI	0,008	0,014	0,357	1	0,55	0,992	0,965	1,019

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## MYELOMA

PP 14

**RISK ASSESSMENT FOR NEWLY DIAGNOSED, FIT AND YOUNG PATIENTS WITH MULTIPLE MYELOMA, IN THE ERA OF NOVEL TREATMENT MODALITIES: ARE THERE ANY ADDITIONAL FACTORS TO BE UNDER CONSIDERATION?**

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**Objective:** Multiple myeloma (MM) is considered a disease of elderlies however, 35-40% of newly diagnosed MM (NDMM) patients (pts) are  $\leq 60$  years (ys) old. Although young NDMM pts succeed better outcomes with the currently used treatment protocols, a considerable number of them (25-35%) succumb to MM, within 5 ys after diagnosis. We evaluated the

overall survival (OS) and the related risk factors, in NDMM pts aged  $\leq 55$  years and we designed a scoring system with predictive value on their long-term outcome. **Methodology:** Among 116 NDMM pts treated from 2010-20 in our center, 58 were  $\leq 55$  ys and 41% had advanced disease, 24% elevated LDH, 15% extramedullary disease (EMD) and 14% high-risk cytogenetic features. Following treatment with 3 (n=48) or 2 (n=10) agents of Velcade, Cyclophosphamide, Lenalidomide and DXM, 90% underwent autologous hematopoietic stem cell transplantation (AHSCT). Female gender, advance disease, EMD presence, elevated LDH and less than very good response pre-AHSCT, adversely affected the OS. **Results:** After a median follow up of 4 ys, the median OS was not reached however, approximately 25% of young NDMM patients died within 4 ys after diagnosis. Based on the aforementioned risk factors we created a risk scoring system which compared to the international staging system (ISS), sufficiently discriminated young NDMM patients who are at risk for poor outcome. The 4-year OS was superior for pts with 0-2 factors compared to those with 3-5 factors (86% vs. 44% respectively,  $p < 0.001$ ). **Conclusion:** Despite the current plethora of the available treatment agents, the heterogeneity in the outcomes among the NDMM pts, highlights the unmet need to establish appropriate criteria for personalized and more efficient treatment approaches, especially for the younger NDMM pts. In this study, we propose an easily applicable scoring system, which can discriminate younger NDMM pts who might need more intensive treatment aiming at prolonged survival rates.

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## PLATELET DISEASES

PP 15

**LONG-TERM OUTCOMES OF PATIENTS TREATED WITH CAPLACIZUMAB FOR IMMUNE-MEDIATED THROMBOTIC THROMBOCYTOPENIC PURPURA (ITTP): THE POST-HERCULES STUDY**

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**Objective:** The efficacy and safety of caplacizumab (CPLZ) for patients (pts) with immune-mediated thrombotic thrombocytopenic purpura (iTTP; also known as acquired TTP) were demonstrated in the Phase 3 HERCULES trial, with a 28-day follow-up period after end of treatment. Post-HERCULES (NCT02878603) evaluated the long-term outcomes of pts with iTTP treated with CPLZ during HERCULES, and the safety and efficacy of repeated CPLZ use for iTTP recurrence. **Methodology:** Over 3 years' follow-up, pts could receive CPLZ with therapeutic plasma exchange (TPE) and immunosuppressive therapy (IST) for iTTP recurrence. Safety was assessed during the overall study period in the intention-to-observe (ITO) population; TTP-related events (TTP-related mortality, recurrence, or major thromboembolic events) were assessed in pts without recurrence in HERCULES or prior to post-HERCULES (efficacy ITO population). Safety and efficacy were also evaluated during recurrences. **Results:** Of 104 pts enrolled, incidences of adverse events (AEs) were similar between pts treated with CPLZ +TPE+IST during HERCULES (n=75) and pts treated with TPE+IST only (n=29). TTP-related events occurred in 4/49 pts (8%) randomized to CPLZ vs 11/29 pts (38%) randomized to placebo. The first recurrence episode was resolved/resolving for all 13 pts treated with CPLZ for recurrence, including 9 pts with repeat CPLZ. The safety profile of CPLZ for recurrence was consistent with HERCULES. **Conclusion:** Over long-term follow-up, the safety profile of patients treated with CPLZ in combination with TPE+IST was generally similar to those who received IST+TPE only, with no observed increases in iTTP recurrence. Repeat use of CPLZ was efficacious, with no new safety concerns.

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## OTHER DISEASES

### PP 16

#### EFFICACY OF FUROSEMIDE IN METHOTREXATE CLEARANCE IN PATIENTS TREATED WITH HIGH DOSE METHOTREXATE

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**Objective:** Methotrexate was first used in 1947 as a chemotherapeutic drug in the treatment of acute lymphoblastic leukemia (ALL). Methotrexate has been extensively explored as an anticancer drug since that time. High dose methotrexate is a term used for doses above 1000mg/m<sup>2</sup>. The objective of this study is to determine efficacy of Furosemide in methotrexate clearance in patients treated with high dose methotrexate. **Methodology:** It was a prospective cohort study carried out at the Oncology department of a tertiary care hospital, Pakistan for a period of one year. Total 80 patients were enrolled and all received daily hydration of at least 5L along with urine alkalization with sodium-bicarbonate and calcium rescue as per protocol. All patients were given Furosemide 40 mg three times a day. Methotrexate levels were monitored every 24 hours to follow its clearance. Data analysis was done by using IBM SPSS version 24. **Results:** The mean (SD) hospital stay in the current study was 4 (±1) days. Frequency of delayed methotrexate clearance was observed in 16 (20%) patients. The mean (SD) time of methotrexate clearance was 4 (±1) days. Renal injury was observed in 8 (10%) subjects, electrolyte imbalance in 12 (15%) subjects, and transaminitis in 11 (13.75%) subjects while mucositis was observed in 8 (10%) subjects. **Conclusion:** Our study concludes that furosemide is effective in methotrexate clearance in patients treated with high dose methotrexate. The use of furosemide reduces the cost and hospital stay. As furosemide is cheaper and easily available so it can be used easily in the methotrexate clearance.

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### PP17

#### CART CELL THERAPY BLACK SHADOW IN HEMATOLOGICAL DISORDERS : SYSTEMIC REVIEW WITH META-ANALYSIS

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**Aim:** To determine the effect of CART therapy on hypogammaglobulinemia and bone marrow aplasia, and to determine the probable medications in management of hypogammaglobulinemia with other associated risk factors and complications. **Methodology:** Systematic search was conducted in 4