suffering from it, followed by 64.3% in ET, 56.2% in MF. The Maximum MPN SAF score recorded is 92 in ET, 74 in PV, and 61 in MF. 65.9% of these patients on Cytoreductive therapy were 34.1% not on. We found that the percentage of all group who are on cytoreductive medications are almost similar. 67.1% of ET patients on cytoreduction, 65.2% of PV, and 62.5% of MF. **Conclusion:** Significant number of MPN patient suffering from the comorbidity of the disease. More than 63% complain from fatigability as major symptoms despite that most of them taking cytoreductive therapy. The mean MPN-SAF score was significant in MF 29, followed by ET 18.5, PV 16.50. **Keywords:** myeloproliferative, morbidity symptoms, MPN-SAF score, MPN, myeloproliferative neoplasms

MPN-185

Ferritin/C-Reactive Protein Ratio is Useful in Distinguishing Secondary Hemophagocytic Lymphohisteocytosis and Sepsis

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Context: Sepsis and secondary hemophagocytic lymphohisteocytosis (sHLH) have common clinical and laboratory landscapes although they should be managed differently. Several attempts for development of tools useful in distinguishing these conditions were made (such as glycosylated ferritin measurement or Hscore) but their clinical availability is low. **Objective:** To evaluate the usefulness of ferritin/C-reactive protein ratio in distinguishing sepsis and sHLH. **Design:** The data from 118 patients (prospectively in 52 patients) were analyzed: 54 pts with sHLH (median age 57.5, range 2-81 years) and 65 with sepsis (median age 64, range 5-89 years). The sHLH diagnosis was based on HLH-2004 criteria. The disease manifested predominantly with unexplained fever and cytopenia and the underlining cause for sHLH in most cases was lymphoid malignancy. The septic group included patients with severe inflammation, infection site and organ failure according to the ACCP/SCCM criteria. Median SOFA score is 10.5 (Q1: 5, Q3: 15). **Results:** Median ferritin levels (ng/ml) in sHLH and septic patients were 9700 (Q1: 3253, Q3: 17952) and 1314 (Q1: 758, Q3: 4019) respectively. Median C-RP levels (mg/l): 85.3 (Q1: 29, Q3: 161) and 222 (Q1: 143, Q3: 277). Median C-RP/ferritin ratio was 113 (Q1: 58.5, Q3: 364) and 9 (Q1: 2.8, Q3: 23) in sHLH and septic patients respectively. According to ROC-analysis, the area under the curve for ferritin was 0.85, C-RP − 0.73, ferritin/C-RP ratio − 0.93. The cutoff of 15 provides sensitivity 98%, specificity 64%; of 30 − 88% and 83% respectively. **Conclusion:** Ferritin/C-RP ratio is a potential new tool for differentiation of sepsis and sHLH. The validation in an independent cohort of patient is needed. **Keywords:** HLH, hemophagocytic lymphohisteocytosis, sepsis, ferritin, MPN, myeloproliferative neoplasms

MPN-269

Outcomes Following Failure of JAK 1/2 Inhibitor Therapy in Patients with Myelofibrosis is Dependent on the Pattern of Failure

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Context: JAK 1/2 inhibitors (JAKi) are the main treatment for symptomatic myelofibrosis (MF). However, responses are not durable. Data on the pattern of JAKi failure and associated long term outcomes is limited. **Objective:** To describe the pattern of JAKi failure and correlate failure pattern with overall survival (OS). **Design:** Retrospective analysis of a mature dataset of chronic-phase MF patients who received JAKi therapy between November 2009 and May 2016. Molecular analysis on pre-JAKi samples was performed by targeted sequencing using a 54 myeloid gene panel. **Main Outcomes Measures:** Failure was defined as either: transformation to accelerated/blast phase (AP/BP); cytopenias (thrombocytopenia or new onset transfusion dependence); spleen progression/loss of response, second cancer and non-hematological toxicity. OS endpoints were estimated by using Kaplan-Meier method. Univariate and multivariate analysis was performed using Cox proportional hazards model. **Results:** One hundred patients (median age: 68 yrs) with chronic phase MF and treated with JAKi therapy (77 ruxolitinib; 23 momelotinib) were included in the study. With a median follow-up of 3.5 yrs, 84 patients failed JAKi therapy due to: transformation to AP/BP (n=12), cytopenias (n=17; thrombocytopenia=9; transfusion dependence=8); spleen progression/loss of response (n=40); second cancer (n=4) and non-hematological toxicity (n=11). Nine patients continue on JAKi therapy (median duration: 4.6 yrs) with sustained clinical improvement; five patients proceeded to allogeneic stem cell transplant and two patients were lost to follow-up. On univariate analysis, pattern of JAKi failure was associated with OS (p=0.05) and became more significant on multivariable analysis (p=0.01). Patients who failed due to spleen progression/loss of response had the longest median survival following JAKi failure at 14.4 months, compared to cytopenias (8.4 months, HR: 1.71) and transformation to AP/BP (3.6 months, HR: 2.22; p<0.001). Baseline clinical/laboratory variables and prognostic scores including MIPSS70, MIPSS70-plus, did not predict pattern of treatment failure. Variables associated with shorter time to JAKi failure and OS included: pre-treatment transfusion dependence (p=0.01; p=0.04), higher MIPSS70 (p=0.003; p=0.01) and MIPSS70-plus (p=0.002; p=0.01). **Conclusions:** In MF patients who fail JAKi therapy,