Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

related mortality by day 100 in either group. **Conclusions:** Our single-institution experience demonstrates that patients with HRNDMM utilizing an IMiD-based regimen followed by HDCT/ASCT results in superior overall survival compared to a non-IMiD regimen. **Keywords:** multiple myeloma, high-risk cytogenetics, immunomodulatory agent, MM

MM-239

A Tertiary Center Experience of Multiple Myeloma Patients with COVID-19: Lessons Learned and the Path Forward

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Context: The COVID-19 pandemic, caused by the SARS-CoV-2 virus, has resulted in over 100,000 deaths in the United States. Our institution has treated over 2,000 COVID-19 patients during the pandemic in New York City. **Objective:** We explored the population of myeloma patients who developed COVID-19 to identify risk factors tied to poor outcomes. **Design:** We performed a retrospective study of a cohort of 58 patients with a plasma cell disorder (54 MM, 4 smoldering MM) who developed COVID-19 between March 1, 2020 and April 30, 2020. We report epidemiological, clinical, and laboratory characteristics, including persistence of viral detection by polymerase chain reaction (PCR) and anti-SARS-CoV-2 antibody testing, treatments initiated, and outcomes. **Setting:** A large tertiary care cancer center in New York at the epicenter of the COVID-19 pandemic in the USA. **Patients:** Patient charts were analyzed retrospectively. Patients had MM or SMM and COVID-19. **Results:** Of the 58 patients diagnosed with COVID-19, 36 were hospitalized and 22 were managed at home. The median age was 67 years; 52% of patients were male, and 63% were non-white. Hypertension (64%), hyperlipidemia (62%), obesity (37%), diabetes mellitus (28%), chronic kidney disease (CKD, 24%), and lung disease (21%) were the most common comorbidities. In the total cohort, 14 patients (24%) died. Older age (>70 years), male sex, and cardiovascular risk were significantly ($p < 0.05$) associated with hospitalization. Among hospitalized patients, laboratory findings demonstrated elevation of traditional inflammatory markers (CRP, ferritin, D-dimer) and a significant ($p < 0.05$) association between elevated inflammatory markers, severe hypogammaglobulinemia, non-white race, and mortality. Ninety-six percent (22/23) of patients developed antibodies to SARS-CoV-2 at a median of 32 days after initial diagnosis. Median time to PCR negativity was 43 (range 19–68) days from initial positive PCR. **Conclusions:** Drug exposure and MM disease status at the time of contracting COVID-19 had no bearing on patient outcome. Mounting a severe inflammatory response to SARS-CoV-2 and severe hypogammaglobulinemia were associated with higher mortality. These findings pave a path to the identification of vulnerable patients who need early intervention to improve outcomes of myeloma patients in future outbreaks of COVID-19. The majority of myeloma patients mounted a specific antibody response to SARS-CoV-2. **Keywords:** multiple myeloma, smoldering multiple myeloma, COVID-19, SARS-CoV-2, New York, pandemic, MM

MM-250

Impact of Prolonged Dose Delays on Response with Belantamab Mafodotin (Belamaf; GSK2857916) Treatment in the DREAMM-2 Study: 13-Month Follow-Up

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Context: Single-agent belamaf demonstrated deep and durable responses in the DREAMM-2 (NCT03525678) primary analysis (1) and long-term follow-up (2,3). Keratopathy (microcyst-like epithelial changes [MECs] observed on eye examination with/without symptoms) were managed through dose delays and reductions. **Objective:** To provide an update on the impact of dose delays on responses in patients receiving single-agent belamaf 2.5-mg/kg in DREAMM-2 (13-month follow-up). **Methods:** In the DREAMM-2 study (single-agent belamaf 2.5 mg/kg [n=97] or 3.4 mg/kg [n=99] Q3W), dose modifications were permitted to manage adverse events (AEs), including keratopathy (MECs), an eye examination finding that may/may not be associated with symptoms. Objective response (IMWG criteria 2016) was assessed by an independent review committee Q3W, regardless of treatment delays. Here, we report a post-hoc analysis on the impact of dose delays >63 days on clinical response in the 2.5-mg/kg arm (the selected dose for future clinical development based on risk–benefit assessment). **Results:** In patients receiving single-agent belamaf (2.5 mg/kg), dose delays (54%) and reductions (35%) due to AEs were common (2,3). Keratopathy (MECs) was the most frequent reason for dose delays (47%) and reductions (25%), leading to only 1 patient (1%) discontinuing treatment (2,3). Of 31 patients with ≥partial response, 16 had prolonged treatment interruptions (>63 days). Of these 16 patients, 14 (88%) continued experiencing a clinical benefit during the first prolonged delay: 6 (38%) deepened their response during delay (1 SD to MR; 2 PR to VGPR; 2 MR to VGPR; 1 VGPR to CR); 6 (38%) maintained the same response

category as that of the last evaluable assessment during delay/first evaluable assessment after delay; 2 (13%) had increasing paraproteins during the delay but did not meet progression criteria. Two (13%) developed disease progression (1 patient 6 weeks into delay; 1 patient 3 weeks after delay). **Conclusions:** Despite dose delays lasting for several cycles to manage AEs, most responses were sustained throughout the delay, thus maintaining clinical benefit for the majority of patients. **Funding:** GlaxoSmithKline (205678). Drug linker technology licensed from Seattle Genetics; monoclonal antibody produced using POTELLIGENT Technology licensed from BioWa. **References:** [1] Lonial Lancet Oncol 2020. [2] Lonial ASCO 2020, EP436. [3] Lonial EHA 2020, EP970. **Keywords:** antibody-drug conjugate, belantamab mafodotin, belamaf, relapsed refractory multiple myeloma, MM

MM-252

Aberrant Plasma Cells in the Apheresis Product as a Prognostic Factor for Minimal Residual Disease Negativity After Transplant in Newly Diagnosed Myeloma Patients

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Context: Autologous stem cell transplantation (ASCT) is the standard frontline therapy for newly diagnosed multiple myeloma (MM) eligible patients. "Contamination" of leukapheresis products with aberrant plasma cells (PCs) has been considered as a possible predictive factor for response and outcome. **Objective:** To evaluate the frequency and clinical value of clonal PCs remaining in leukapheresis products using next generation flow cytometry (NGFC), which is able to detect aberrant clonal PCs at levels reaching 10^{-6}. **Design:** Prospective study. **Setting:** A referral center in Athens, Greece. **Patients:** MM patients after four cycles of induction therapy (VCD or VRD) followed by ASCT in the Department of Clinical Therapeutics, University of Athens, Greece. **Interventions:** Ninety-eight patients with newly diagnosed multiple myeloma were assessed for the presence of clonal PCs with the 8-color NGFC protocol suggested by EuroFlow. Eight to ten million cells were examined; the median sensitivity of the test was 2–4 × 10^{-6} per sample. All patients received high-dose melphalan and ASCT. Using the same NGFC protocol, 53 patients who achieved complete response (CR) post-ASCT, based on the IMWG criteria, were also examined for the presence of minimal residual disease (MRD). **Main outcome measures:** Aberrant PCs in leukapheresis products. **Results:** This analysis revealed 58 (59%) "uncontaminated" (con-) and 40 (41%) "contaminated" (con+) leukapheresis products. The majority of con+ cases had very low numbers of aberrant plasma cells detected; 18 (45%) at the level of 10^{-6}, 15 (38%) at the level of 10^{-4} and 7 (18%) at levels $\geq 10^{-3}$. On day 100 post-ASCT, MRD evaluation was performed on 33 con- and 20 con+ patients, who had achieved CR. MRD positivity was found in 11 out of 53 cases (20.8%). Only 3 out of 33 (9.1%) con- patients were found MRD+, all of which at very low levels ($<10^{-5}$). Forty percent of con+ patients were MRD+ at levels varying from 10^{-2} to 10^{-5}. **Conclusions:** Using NGFC, we were able to detect aberrant plasma cells in 40% of apheresis products at the level of 10^{-6}. The presence of aberrant plasma cells in the apheresis products correlates with higher probability for MRD+ after ASCT, whereas their absence predicts MRD negativity. **Keywords:** multiple myeloma, MM, autologous stem cell transplant, flow cytometry, minimal residual disease, MDR

MM-269

Allogeneic Hematopoietic Stem Cell Transplantation in Patients with Multiple Myeloma

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Introduction: Allogeneic hematopoietic stem cell transplantation (allo-HSCT) is not standard of care in patients with multiple myeloma (MM), but it is a potential treatment option and associated with a high risk of severe complications. **Aim:** To study the effectiveness of allo-HSCT for young patients with MM. **Materials and methods:** From 2013 to 2018, eight patients (6 male, 2 female) with MM, aged from 27 to 55 years (median 39 years), underwent allo-HSCT. All patients had adverse prognostic factors. During the induction therapy, the patients received from 2 to 4 lines of therapy. Before the auto-HSCT, a VGPR was achieved in 1 patient, a PR in 4 patients and a progression of disease in 3 patients. Seven patients underwent a tandem auto/allo-HSCT and one patient underwent an allo-HSCT. In all cases, an HLA-identical sibling donor was used. Reduced intensity conditioning regimen (fludarabine + busulfan + ATG) was performed in all patients. Immunosuppressive therapy included cyclophosphamide at +3 and +4 days. **Results:** The duration of agranulocytosis ranged from 12 to 26 days (median 19 days) after allo-HSCT. Acute GVHD was developed in 62.5% of cases, of which severe GVHD was noted in 25% of patients. 5 patients achieved CR; 3 patients had a VGPR 5 months after allo-HSCT. All patients achieved 100% donor molecular chimerism. When observed for 15 to 79 months (median 51 months) after allo-HSCT, CR was achieved in 62.5% of the patients. One patient died due to complications of severe GVHD. In 2 cases, 12 and 19 months after allo-HSCT, against the background of 100% molecular chimerism, myeloma progression was observed. 6-year PFS was 75%, 6-year OS was 89%, with a median observation of 51 months. **Conclusion:** Allo-HSCT can be considered as an effective treatment for young patients with high-risk MM. 6-year PFS and 6-year OS