burden and outcomes of arrhythmias in CAR-T recipients remain limited. **Design:** We conducted a retrospective cohort study using the National Inpatient Sample (2017–2022). Adult CAR-T hospitalizations were identified using ICD-10-PCS codes and stratified by arrhythmia presence, including atrial fibrillation, flutter, ventricular or supraventricular tachycardia, bradyarrhythmias, and conduction disorders. The primary outcome was in-hospital mortality. Secondary outcomes included length of stay (LOS), total charges, cardiogenic shock, vasopressor use, and cardiac arrest. Multivariable survey-weighted logistic and linear regression models were applied, adjusting for demographics and comorbidities. **Results:** Among 32,640 CAR-T therapy hospitalizations in the United States, 12% (n ≈ 3,920) had arrhythmias—most commonly atrial fibrillation (7%), followed by bradyarrhythmias (2.25%), supraventricular tachycardia (1.99%), and ventricular tachycardia (1.49%). Patients with arrhythmias were significantly older (mean age, 63.1 vs 43.7 years; $P < 0.001$), more often female (69.3% vs 57.5%; $P < 0.001$), predominantly White (76.9% vs 63.6%; $P < 0.001$), and had a higher comorbidity burden (Charlson category 3, 58.3% vs 48.1%; $P < 0.001$). Arrhythmia was independently associated with higher inpatient mortality (OR, 3.06; 95% CI, 1.84–5.10; $P < 0.001$), prolonged LOS (16.9 vs 10.3 days; +4.79 days; $P < 0.001$), increased hospital charges ($953,632 vs $525,958; +$268,230; $P < 0.001$), and greater vasopressor use (OR, 2.23; $P = 0.001$). Associations with cardiogenic shock (OR, 1.72; $P = 0.595$) and cardiac arrest (OR, 3.05; $P = 0.103$) were not statistically significant. **Conclusions:** In this nationally representative cohort, arrhythmia was associated with one in eight CAR-T hospitalizations and independently linked to increased in-hospital mortality, resource utilization, and hemodynamic compromise. Although associations with cardiac arrest and shock were nonsignificant, observed trends support vigilance. These findings underscore the need for prospective studies and structured cardiac surveillance to optimize safety in CAR-T recipients. **Keywords:** CT, CAR-T therapy, cardiotoxicity, arrhythmia, in-hospital mortality

CT-1425

Higher Pretransplant Lymphocyte Count Is Associated With Improved Survival in Allogeneic Stem Cell Transplantation With Antithymocyte Globulin

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Background: Antithymocyte globulin (ATG) is frequently used as part of graft-vs-host disease (GVHD) prophylaxis in allogeneic hematopoietic stem cell transplantation (HSCT), particularly in matched unrelated donor (MUD) settings. Although ATG is traditionally dosed according to body weight, recent studies suggest that immune profiling—specifically, absolute lymphocyte count (ALC)—may help tailor ATG dosing and improve clinical outcomes. This study evaluated the association between pretransplant ALC and outcomes in patients undergoing MUD HSCT with ATG prophylaxis. **Methods:** We conducted a retrospective analysis of 56 adult patients diagnosed with acute leukemia or myelodysplastic syndrome who underwent MUD peripheral blood stem cell transplantation between August 2018 and December 2024 at a single institution. All patients received a uniform ATG (Grafalon) regimen of 30 mg/kg over 3 days. Preconditioning ALC was recorded and categorized using thresholds of $\geq 0.5 \times 10^9$/L, $\geq 0.75 \times 10^9$/L, and $\geq 1 \times 10^9$/L. Clinical outcomes analyzed included incidence of acute and chronic GVHD, relapse, nonrelapse mortality (NRM), and overall survival (OS). **Results:** The median patient age was 47.5 years, with a median follow-up duration of 580 days. The median preconditioning ALC was 1.05×10^9/L, while the median ALC immediately before ATG administration was significantly lower (0.07×10^9/L), reflecting early lymphodepletion. GVHD rates did not differ significantly across the defined ALC thresholds. Similarly, there were no statistically significant differences in relapse or NRM across ALC groups. However, patients with a preconditioning ALC $\geq 0.75 \times 10^9$/L demonstrated significantly improved OS, with median survival not reached, compared with 280 days in patients with ALC $\leq 0.75 \times 10^9$/L ($P = 0.008$). Moreover, being in complete remission at the time of transplant was also associated with significantly better OS ($P = 0.016$). **Conclusion:** Higher preconditioning ALC (particularly $\geq 0.75 \times 10^9$/L) is associated with improved OS in patients undergoing MUD HSCT with ATG prophylaxis, despite showing no significant effect on GVHD, relapse, or NRM. These findings support the consideration of ALC as a potential biomarker for individualized ATG dosing strategies, warranting further prospective investigation. **Keywords:** CT, antithymocyte globulin, absolute lymphocyte count

CT-1429

Real-World Mortality Trends in Hematologic Malignancies Following the Introduction of CAR-T Therapy: A 20-Year US Population-Based Study

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Background: Chimeric antigen receptor T-cell (CAR-T) therapy works by inserting bioengineered receptors into the host's T cells, rendering them capable of recognizing cancer-specific antigens,