Underlying Cause of Death in Patients of Waldenström macroglobulinemia in the United States: A CDC WONDER Analysis (1999-2020)

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Methods :
Retrospective analysis of the Multiple Causes of Death dataset from the Centers for Disease Control and Prevention Wide-Ranging Online Data for Epidemiologic Research database was performed. We included US adults older than 25-years of age who had reported WM (International Classification of Diseases-10 code C88.0) as a contributing cause of death between 1999-2020. Data was stratified according to the UCD and age-adjusted mortality rates (AAMR) per 100,000 persons were determined.

RESULTS: Between 1999-2020, there were 11,393 deaths reported in patients of WM in the US. Most of the patients that died were male (60%). Most patients died in inpatient medical facilities (35.91%) or in their homes (32.70%). The most common cause of death was from the malignancies (82.86%; AAMR:0.19). Cardiovascular diseases accounted for 8.25% (AAMR:0.014) deaths, within which ischemic heart diseases was the largest cause, accounting for 4.76% (AAMR:0.012) of the total WM mortality. The other UCD include chronic lower respiratory diseases (1.68%), cerebrovascular diseases (1.42%; AAMR:0.002), accidental injuries (1.07%), Alzheimer disease (0.84%; AAMR:0.002), and in-situ or benign neoplasms (0.79%). The other minor cause of death reported were renal diseases, diabetes mellitus, aspiration pneumonitis, bacterial and viral pneumonias, Parkinson disease, hypertension and hypertensive kidney disease, cirrhosis and chronic liver disease, and anemia.

CONCLUSION: We found that malignancies, particularly WM itself, is the predominant cause of death among WM patients, accounting for more than 4/5th the mortality. Cardiovascular diseases, led by ischemic heart disease, represent the second most common UCD, followed by chronic lower respiratory diseases and cerebrovascular diseases. Further research is needed to evaluate whether targeted interventions for cardiovascular risk reduction may benefit mortality outcomes.