

BEYOND LEUKEMIC TRANSFORMATION: EXCESS CARDIOVASCULAR MORTALITY IN A TWO-DECADE SEER COHORT OF 84,806 PATIENTS WITH MYELOYDYSPLASTIC SYNDROMES

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INTRODUCTION

- Myelodysplastic syndromes (MDS) are clonal hematopoietic neoplasms associated with substantial morbidity and mortality, particularly among older adults.
- Although leukemic transformation remains a major disease-related outcome, **nonleukemic causes of death are increasingly recognized**.
- CVD may substantially contribute to MDS mortality due to advanced age, comorbidities, chronic inflammation, anemia-related stress, transfusion/iron overload, and treatment effects, yet population-level estimates of excess cardiovascular mortality remain limited

AIM

- To quantify cardiovascular mortality and determine the magnitude of excess cardiovascular mortality among patients with MDS compared with the general U.S. population.

Primary Question

- Is cardiovascular mortality substantially higher than expected among patients with MDS?

METHOD

Design: Retrospective population-based cohort study using SEER (2000–2021).

Population: 84,806 patients with MDS.CVD

Mortality: Heart disease, cerebrovascular disease, hypertension-related disease, atherosclerosis, and aortic/arterial disease.

Analysis: Expected deaths were based on age-, sex-, and race-specific U.S. mortality rates; SMRs with 95% CIs were calculated overall and by demographic subgroups.

CONCLUSIONS

- Cardiovascular disease accounted for 12,165 deaths (~19% of all deaths) among 84,806 patients with MDS.
- Patients with MDS experienced markedly elevated cardiovascular mortality compared with the general U.S. population.
- The overall cardiovascular SMR was 25.3 (95% CI, 24.9–25.8), representing approximately 25-fold higher cardiovascular mortality than expected.
- Excess cardiovascular mortality was observed across sex, age, and racial/ethnic subgroups.

RESULTS



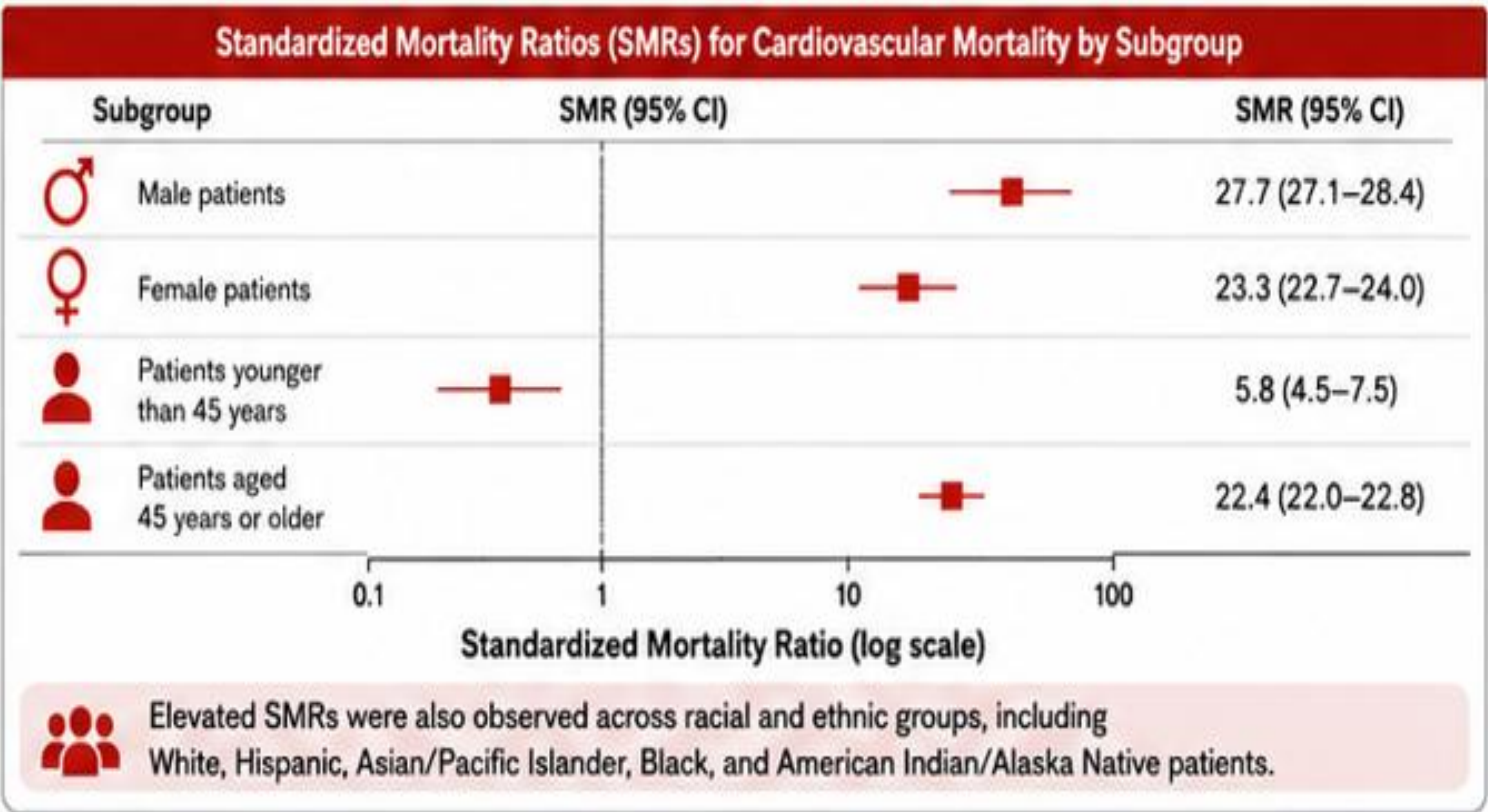
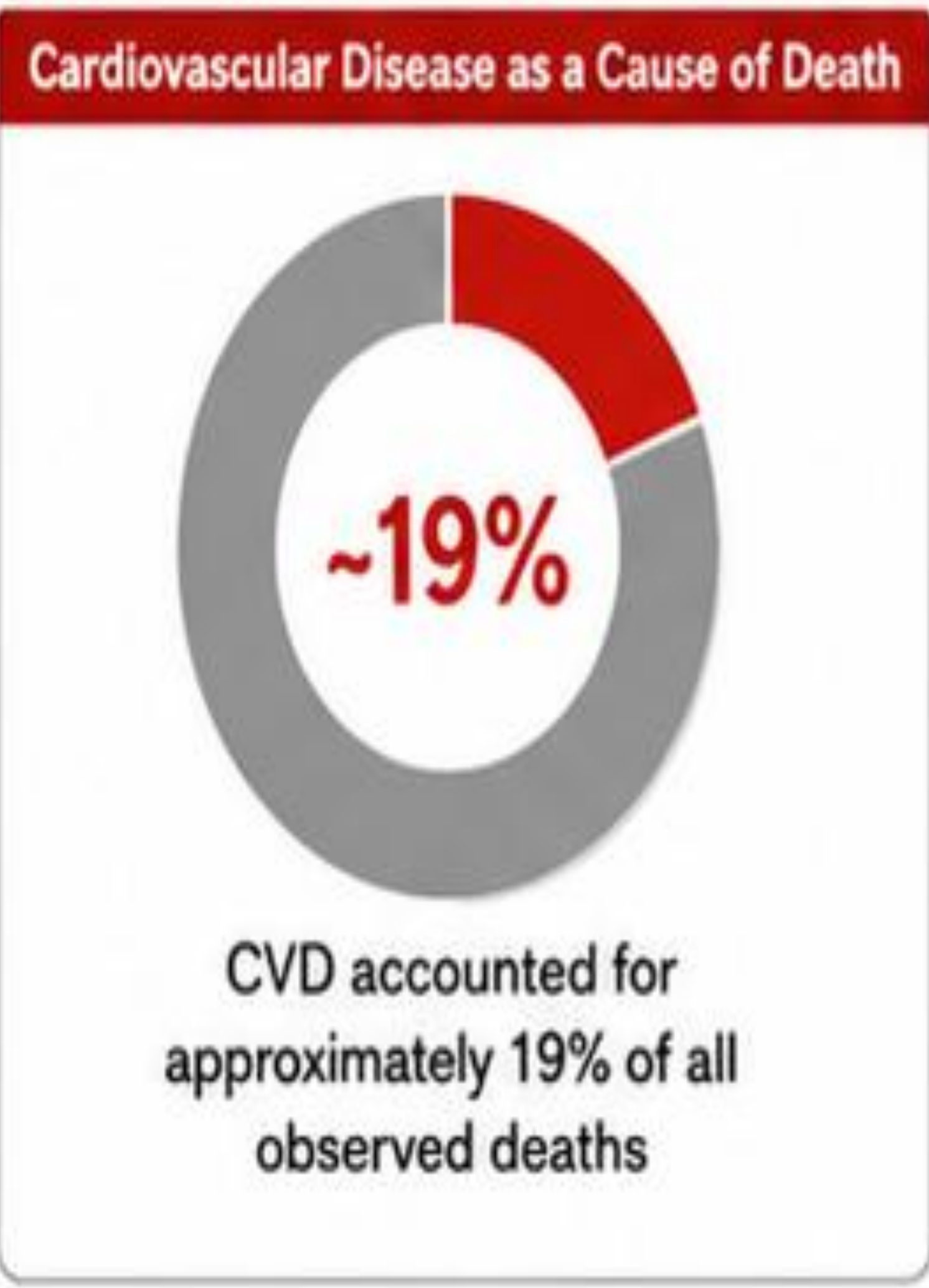
84,806
Patients with MDS



64,827
Total deaths



12,165
Cardiovascular deaths



25.3
Overall Cardiovascular
Mortality SMR
(95% CI, 24.9-25.8)

REFERENCES

- National Cancer Institute, Surveillance, Epidemiology, and End Results (SEER) Program
- SEER cause- of – death classification and population mortality data, 2000-2021.