Prognostic Value of Cardiac Magnetic Resonance-Derived Extracellular Volume in Cardiac Amyloidosis: An Updated Systematic Review and Meta-analysis

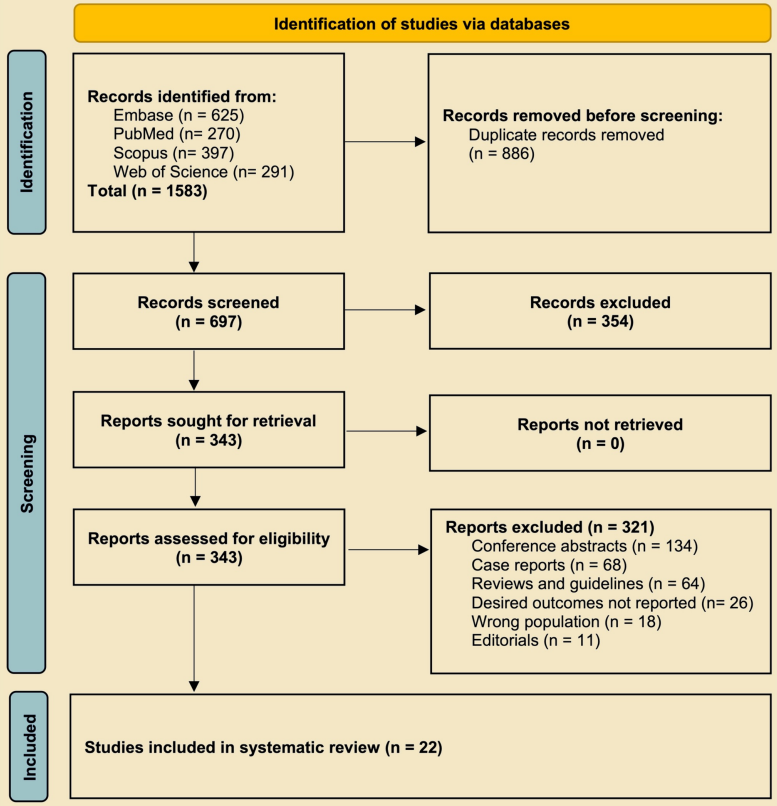
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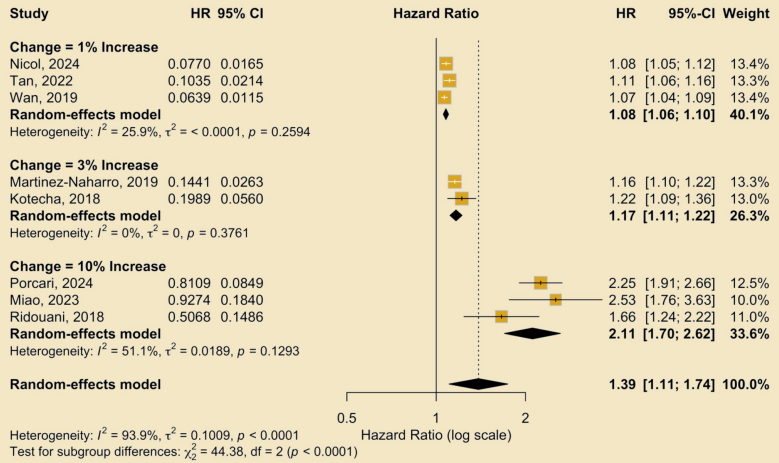
BACKGROUND AND OBJECTIVES

- While the diagnostic value of CMR-derived ECV in cardiac amyloidosis is well established, its prognostic utility remains inconsistent across studies.
- To perform a meta-analysis to evaluate the prognostic value of CMR-derived ECV in patients with cardiac amyloidosis.

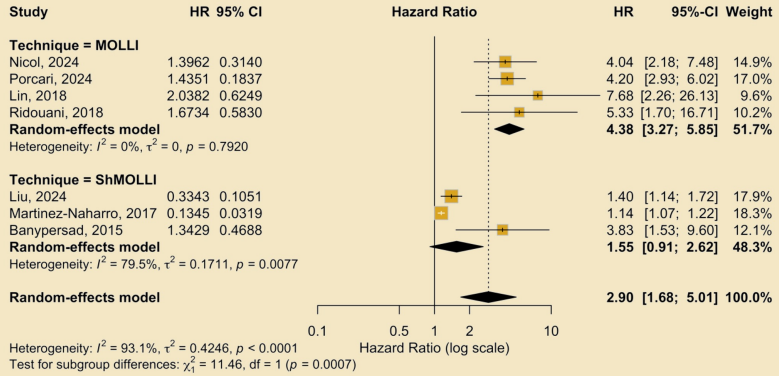
The Flowchart Showing the Study Selection



Pooled HR of ECV for All-Cause Mortality (Continuous Variable)



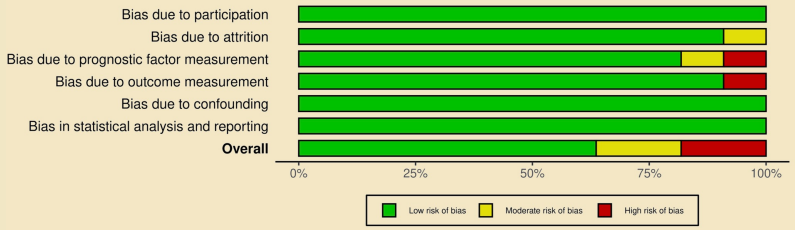
Pooled HR of ECV for All-Cause Mortality (Dichotomous Variable)



RESULTS

- ECV demonstrated a significant prognostic value for all-cause mortality. Higher ECV values were associated with increased mortality, both as a dichotomous (HR: 2.90; 95% CI: 1.68 - 5.01) and continuous variable (HR for 1% increase: 1.08; 95% CI: 1.06 - 1.10; HR for 3% increase: 1.17; 95% CI: 1.11 - 1.22; and HR for 10% increase: 2.11; 95% CI: 1.70-2.62).
- ECV was predictive of HFH, with an HR of 1.07 (95% CI: 1.04–1.10) as a continuous variable.
- While ECV was also predictive of MACE, a pooled HR could not be calculated due to inconsistent reporting methods across the included studies.

Risk of Bias Assessment in the Included Studies Using the QUIPS Tool



CONCLUSION

- CMR-derived ECV is a significant predictor of all-cause mortality, HFH, and MACE in cardiac amyloidosis.
- There is a direct relations hip between incremental increases in ECV and the risk of death.
- CMR-derived ECV is a valuable, noninvasive risk stratification tool in patients with cardiac amyloidosis.

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