







# Diagnostic accuracy of cardiac magnetic resonance imaging in cardiomyopathies: insights from the University Hospital Centre Zagreb

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**Introduction:** Cardiac magnetic resonance (CMR) imaging has a reported accuracy of 97% in distinguishing between ischemic and non-ischemic heart diseases. However, ischemic patterns are still observed in 6–13% of patients with non-obstructive coronary artery disease. One randomized controlled trial showed that CMR alone identifies the specific cause of non-ischemic heart failure in 36% of cases, a figure that increases to 50% when combined with other clinical information.<sup>1-3</sup> This study aims to evaluate the accuracy of CMR in diagnosing specific non-ischemic cardiomyopathies at the University Hospital Center (UHC) Zagreb.

**Methods:** We conducted a retrospective analysis of cardiac MRI scans performed at UHC Zagreb between January and June 2024. The analysis focused on the clinical indications for each scan, the diagnostic findings, and any changes to preliminary diagnoses based on CMR results.

**Results:** A total of 92 cardiac MRI scans were successfully performed during the study period. Of these, 50 (54.3%) were performed to investigate the etiology of heart failure or acute myocardial injury in patients with non-obstructive coronary artery disease. The remaining scans assessed ischemia, viability, fibrosis, valvular disease severity, and other conditions. Among the 50 etiology-related scans, 27 (54%) provided a specific diagnosis of non-ischemic cardiomyopathy, 6 (12%) showed ischemic findings despite the absence of significant coronary artery disease, and 17 (34%) did not clarify the etiology.

**Conclusion:** Findings suggest that at our tertiary center, the accuracy of CMR in diagnosing the etiology of cardiomyopathies is comparable to that of other institutions. Further improvements in diagnostic outcomes could be realized through enhanced interdisciplinary collaboration between cardiology and radiology teams.

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## LITERATURE

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