

Editor's chronicles: redefining pathways in acute cardiac care

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Welcome to an immersive exploration of cutting-edge research and transformative insights that converge to redefine the landscape of acute cardiovascular medicine in the July issue of *The European Heart Journal Acute Cardiovascular Care*.

In a seminal study by Hong *et al.*¹, a journey into the realm of acute myocardial infarction (AMI) patients with multi-vessel disease undergoing veno-arterial extra-corporeal membrane oxygenation (ECMO) is undertaken. Through a meticulous analysis of data from the RESCUE and SMC-ECMO registries, the researchers illuminate the pivotal role of residual ischaemia in determining clinical outcomes. Their findings underscore a significant correlation between residual SYNTAX score and 1-year all-cause mortality rates. Although complete revascularization was associated with improved survival, only a quarter of patients achieved complete revascularization. This study supports future randomized trials to elucidate the optimal revascularization strategy in this high-risk patient cohort.

In the prospective GULLIVE-R study by Zeymer *et al.*², the focus shifts towards secondary prevention strategies post-AMI. Through a comprehensive evaluation spanning 2 years and involving over 2500 outpatients from 150 German centres, the researchers shed light on significant gaps in patient knowledge and risk estimation. Despite high adherence to guideline-recommended medications, only half of the patients receive all key secondary preventative medications, signalling a pressing need for enhanced education and prevention strategies. This study serves as a clarion call for concerted efforts to bridge the knowledge gap and optimize secondary prevention strategies post-AMI.

Eggers *et al.*³ delve into the intricate web of high-sensitivity cardiac troponin T (hs-cTnT) levels in guiding cardiovascular pharmacotherapy initiation in non-ST segment elevation acute coronary syndrome (NSTEMI-ACS). Leveraging data from the SWEDEHEART registry, the researchers unravel the nuanced interactions between hs-cTnT levels, medications, and long-term outcomes. While beta-blockers and renin-angiotensin-aldosterone system inhibitors offer modest risk reductions, statins emerge as a potent therapeutic intervention, particularly at higher hs-cTnT concentrations. However, the study also underscores the imperative for personalized treatment approaches to optimize patient outcomes in NSTEMI-ACS.

In an observational study of the ACTION initiative, Knott *et al.*⁴ illuminate the challenges of diagnosing myocardial infarction (MI) in

patients with chronic kidney disease (CKD). Elevated hs-cTnT levels pose a significant diagnostic hurdle, necessitating tailored diagnostic thresholds for accurate MI diagnosis in CKD patients. This study heralds a paradigm shift towards personalized diagnostic approaches to optimize patient care in this vulnerable population.

The study led by Carreras-Mora *et al.*⁵ introduces a pioneering approach to prognostic assessment in ST-segment elevation MI by integrating lung ultrasound (LUS) into the established Killip scale. Through the innovative Killip pLUS scale, the researchers offer enhanced risk stratification, promising to refine acute cardiac management and hopefully improve patient outcomes. Alday-Ramírez *et al.*⁶ present an intriguing study exploring the utility of portal vein Doppler (PVD) in monitoring decongestive therapy in patients with severe tricuspid valve regurgitation (TR). With promising results indicating a correlation between PVD improvements and TR amelioration, this study advocates for further trials to validate PVD-guided decongestion as a transformative approach in improving patient outcomes.

Finally, Dhont *et al.*⁷ educational paper offers a comprehensive exploration of non-invasive imaging in acute decompensated heart failure with preserved ejection fraction. Through portable ultrasound devices and the integration of various imaging modalities, clinicians can swiftly discern clinical presentations and associated comorbidities, revolutionizing emergency care in heart failure patients.

So, grab your copy of *The European Heart Journal Acute Cardiovascular Care*, relax, and immerse yourself in the cutting-edge science and clinical excellence presented in this July edition. Stay informed, stay inspired, and continue delivering high-quality care to patients with acute cardiovascular conditions.

Enjoy!

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Data availability

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References

1. Hong D, Choi KH, Ahn C-M, Yu CW, Park IH, Jang WJ, et al. Clinical significance of residual ischaemia in acute myocardial infarction complicated by cardiogenic shock undergoing venoarterial-extracorporeal membrane oxygenation. *Eur Heart J Acute Cardiovasc Care* 2024;**13**:525–534.
2. Zeymer U, Goss F, Kunadt M, Oldenburg S, Hochadel M, Thiele H, Werdan K. Patient knowledge about risk factors, achievement of target values, and guideline-adherent secondary prevention therapies 12 months after acute myocardial infarction. *Eur Heart J Acute Cardiovasc Care* 2024;**13**:537–545.
3. Eggers KM, Lindhagen L, Lindahl B. Cardiovascular medications, high-sensitivity cardiac troponin T concentrations, and long-term outcome in non-ST segment elevation acute coronary syndrome. *Eur Heart J Acute Cardiovasc Care* 2024;**13**:559–562.
4. Knott JD, Ola O, De Michieli L, Akula A, Mehta RA, Dworak M, et al. Diagnosis of acute myocardial infarction in patients with renal failure using high-sensitivity cardiac troponin T. *Eur Heart J Acute Cardiovasc Care* 2024;**13**:546–558.
5. Carreras-Mora J, Vidal-Burdeus M, Rodríguez-González C, Simón-Ramón C, Rodríguez-Sotelo L, Sionis A, et al. Killip scale reclassification according to lung ultrasound: Killip pLUS. *Eur Heart J Acute Cardiovasc Care* 2024;**13**:566–569.
6. Alday-Ramírez SM, de Jesús Leal-Villarreal MA, Gómez-Rodríguez C, Abu-Naeima E, Solís-Huerta F, Gamba G, et al. Portal vein Doppler tracks volume status in patients with severe tricuspid regurgitation: a proof-of-concept study. *Eur Heart J Acute Cardiovasc Care* 2024;**13**:570–574.
7. Dhont S, Verbrugge FH, Verwerft J, Bertrand PB. Non-invasive imaging in acute decompensated heart failure with preserved ejection fraction. *Eur Heart J Acute Cardiovasc Care* 2024;**13**:575–582.