

Breakthroughs in heart failure management: From biomarkers to novel therapeutics

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Heart failure (HF) remains one of the leading global causes of morbidity and mortality. This presentation discusses the evolving landscape of HF management, emphasizing biomarker-based diagnosis, personalized treatment plans, and next-generation therapeutics. The talk begins with an overview of key biomarkers—BNP, NT-proBNP, galectin-3, and soluble ST2—and their roles in early diagnosis, prognosis, and therapy monitoring. Updates on guideline-directed medical therapy (GDMT), including SGLT2 inhibitors, ARNI combinations, and mineralocorticoid antagonists, will be explored. New therapeutic targets, such as mitochondrial modulators and precision-based anti-fibrotic agents, will also be highlighted. Clinical insights from trials involving gene therapy and regenerative cell-based treatments will be reviewed to illustrate future possibilities for reversing myocardial damage. Attention will be given to multidisciplinary HF clinics and digital heart-failure monitoring platforms that support patient adherence, reduce hospitalizations, and improve quality of life. The session concludes with strategies to implement holistic HF care in low-resource settings.

Biography

Amira Khaled is a consultant cardiologist and senior lecturer at Cairo University. Her expertise includes heart failure, cardiac biomarkers, and advanced therapeutics. She has contributed to regional and international HF research collaborations and regularly publishes on emerging treatment pathways. Dr. Khaled is also an advocate for improving heart-failure care in developing countries through education and telemedicine.

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