Top Ten Things To Know
Electrocardiographic Early Repolarization

1. The early repolarization pattern (ERP) had generally been considered benign until recent studies began to show associations between an ERP and endpoints including all-cause, cardiac, and arrhythmic mortality.

2. While the study of ERP has been hindered because of the lack of an established consensus definition, observational studies in varied populations have suggested that its prevalence ranges from 1% to 18%.

3. This advisory provides an overview of the early repolarization (ER) literature and emphasizes the variation in definitions, offers guidance on appropriate recognition and risk management, and highlights crucial areas for future research.

4. The paper proposes standardized terminology for patterns including ST-segment elevation, terminal QRS notch, and terminal QRS slur to further qualify the term ER whenever it is used.

5. Some observations have provided evidence of a genetic basis for ERP, and rare genetic variants in genes involved in cardiac repolarization – including KCNJ8, SCN5A, and L-type calcium channel subunits – have been observed in candidate gene screening studies of affected patients.

6. Though ERP is common enough to be considered a normal variant, relatively few individuals with this condition will experience cardiac arrest. Clinical characteristics including sex and family history in combination with ECG characteristics such as the type and location of ER may be helpful in stratifying risk.

7. Current variation in the definitions of ERP have made direct comparison of studies difficult. Efforts should be made to describe ERP using outcome-driven approaches.

8. Large-scale epidemiological and genetic approaches will be necessary to better understand the characteristics and underlying mechanisms of ERP and related arrhythmias.

9. The development of large-scale registries is recommended to improve risk stratification of patients with ERP and inform interventions to reduce the risk of arrhythmias.

10. Despite the prevalence of ERP, many challenges remain in the interpretation of this phenomenon; it is critical that high-quality, longitudinal data be integrated to increase knowledge regarding its clinical relevance.