2025 Major News in Hyperlipidaemia

Updated dyslipidemia guidelines from ESC/EAS[1]: The updated dyslipidaemia guidelines place stronger emphasis on the early identification and management of inherited lipid disorders, including heterozygous and homozygous familial hypercholesterolaemia, elevated lipoprotein(a), and familial chylomicronaemia syndrome. The update supports more intensive and personalised treatment approaches, recognising the high cardiovascular risk and unmet needs faced by these patient groups. Importantly, it acknowledges the growing role of targeted and emerging therapies, reinforcing the need for tailored care to reduce long-term disease burden and improve outcomes for patients.

Familial Hypercholesterolaemia (FH)

New insights into FH diagnosis and management: A high-profile article in The Lancet Diabetes & Endocrinology highlighted ongoing advances in FH care and the need for timely diagnosis and treatment optimization.[2]

Emerging gene therapies on the horizon: The American College of Cardiology published a feature on gene therapy approaches for FH, noting that inclisiran and other RNA-target ed agents are the closest to clinical use and gene editing approaches remain a potential future direction.[3]

FH EARLY, a major collaborative research initiative launched: A new €7.25M Horizon project was launched in Europe to improve early diagnosis, risk stratification, and co-management of FH using precision medicine approaches.[4]

Genomic screening to improve lipid management: New evidence showed that population genomic screening for FH variants can help identify undiagnosed individuals and improve LDL-cholesterol management through targeted treatment.[5]

Homozygous Familial Hypercholesterolaemia (HoFH)

New review highlights emerging HoFH treatments: The review summarized recent developments in the treatment of HoFH (covering both LDL receptor–dependent and –independent therapies) and discussed what these advances mean for achieving very low LDL-C in patients with HoFH.[6]

Pediatric treatment updates:

- The European Commission has approved evinacumab for children as young as 6 months, expanding access to this ANGPTL3-targeted therapy for pediatric patients with HoFH.[7]
- The ORION-13 trial found that inclisiran can significantly lower LDL-C in adolescents with genetically confirmed HoFH.[8]

Phase 3 trial of zodasiran begins: The YOSEMITE Phase 3 study of zodasiran, an investigational RNA interference therapy targeting ANGPTL3, has begun and will evaluate its safety and LDL-C–lowering effects in people with HoFH.[9]

Evolocumab now approved for adults with HoFH in the US: The FDA has updated the label for evolocumab to include treatment for adults with HoFH, offering an additional option for lowering LDL-C in this patient population.[10]

Elevated lipoprotein a Lp(a)

First Ever Lp(a) Global Summit: The Summit, convened by the FH Europe Foundation and partners, brought together experts, policymakers, industry representatives, and patient advocates. Highlighting the major global burden of elevated Lp(a), this event also advanced consensus on screening, treatment priorities, and policy frameworks, through the launch the Brussels International Declaration on Lp(a).[11]

Cost effectiveness of Lp(a) screening: The analysis showed that targeted Lp(a) testing can be economically justified, as it enables earlier identification of individuals at high cardiovascular risk and supports more efficient allocation of preventive interventions. By improving risk stratification beyond traditional factors, Lp(a) testing can help direct intensive prevention to those most likely to benefit, with favorable implications for both clinical outcomes and healthcare costs.[12]

Clinical Trials: Major phase 3 outcome trials are ongoing which all showed in the phase 2 studies pronounced and sustained Lp(a) lowering. The phase 3 studies include pelacarsen in Lp(a) HORIZON, olpasiran in OCEAN(a)/OCEAN(a)-PreEvent, lepodisiran in ACCLAIM-Lp(a), and muvalaplin in MOVE-Lp(a). Whether the marked reductions in Lp(a) translate into fewer CV events remains the key unanswered question, with outcome trials representing the final piece needed to establish clinical benefit.[13-15]

Familial Chylomicronaemia Syndrome (FCS)

EU Approval of olezarsen and clinical experience: The European Union has approved olezarsen as an adjunct to diet for adults with FCS, based on Phase 3 Balance trial data showing significant and sustained triglyceride reductions and a clinically meaningful reduction in acute pancreatitis events, with a favorable safety profile. Additional insight from a sub-study of the Balance open-label extension demonstrated that olezarsen treatment led to improvements in FCS-related symptoms and quality of life, with most participants reporting meaningful clinical benefit and high treatment satisfaction.[16]

NEW

First FDA-approved therapy and first real-world use of plozasiran: The FDA has approved plozasiran for adults with FCS, as an adjunct to diet. Plozasiran's authorization is based on Phase 3 PALISADE trial data demonstrating significant and sustained triglyceride reductions and favorable clinical outcomes compared with placebo. Shortly after approval, the Stony Brook Heart Institute announced the world's first commercial administration of plozasiran in an FCS patient, marking the transition from clinical trials to real-world clinical use and expanding access to the first disease-modifying therapy available for this population.[17-18]

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FH Europe Foundation