Newborn Screening Follow-up for Elevations of C8, C6, and C10 Acylcarnitines (also applies to any plasma or serum C8, C6, and C10 acylcarnitine elevations)*

Elevation of C8 acylcarnitine; Lesser elevations of C6 and C10

Perform:
- OAU / Organic Acids Screen, Urine
- ACYLG / Acylglycines, Quantitative, Urine
AND 1 of the following:
- ACRN / Acylcarnitines, Quantitative, Plasma
- ACRNS / Acylcarnitines, Quantitative, Serum

Routine labs performed locally:
Glucose, electrolytes, blood gases, and liver function tests

- Plasma or serum C8–High
- Plasma or serum C6 or C10–High or Normal
- Urine dicarboxylic acids–High or Normal
- Urine hexanoylglycine–High

Diagnostic for medium-chain acyl-CoA dehydrogenase deficiency

Consider MCADZ / Medium-Chain Acyl-CoA Dehydrogenase (MCAD) Deficiency Full Gene Analysis for molecular confirmation of biochemical diagnosis

- Plasma or serum–Normal
- Urine–Normal

STOP

* Interpretive report provided for all the tests in this algorithm