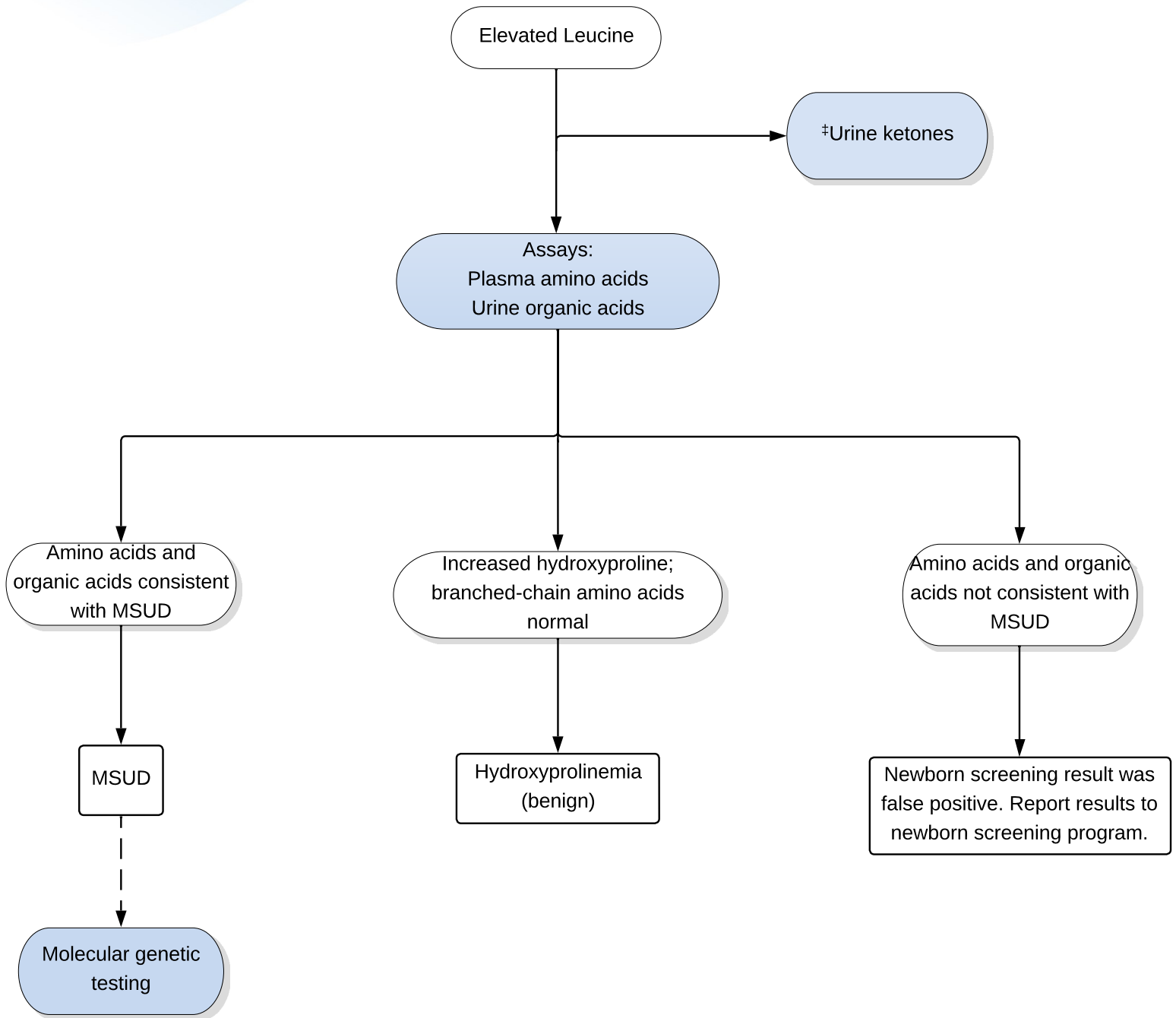


**Reaffirmed
January, 2026**

Leucine Elevated



Key

- Actions are shown in shaded ovals; results are in the unshaded ovals. Diagnostic outcomes are shown in boxes.
- Dashed line reflects an optional test.
- ‡May be performed locally as a rapid screen to assess severity.

Abbreviations

- MSUD = Maple syrup urine disease

This algorithm and accompanying ACT sheet is designed primarily as an educational resource for medical geneticists and other clinicians to help them provide quality medical services. Adherence to this algorithm is completely voluntary and does not necessarily assure a successful medical outcome. This algorithm should not be considered inclusive of all proper procedures and tests or exclusive of other procedures and tests that are reasonably directed to obtaining the same results. In determining the propriety of any specific procedure or test, clinicians should apply their professional judgment to the specific clinical circumstances presented by the individual patient or specimen. Clinicians are encouraged to document the reasons for the use of a particular procedure or test, whether or not it is in conformance with this algorithm and accompanying ACT sheet. Clinicians also are advised to take notice of the date this algorithm and accompanying ACT sheet was adopted, and to consider other medical and scientific information that becomes available after that date. It also would be prudent to consider whether intellectual property interests may restrict the performance of certain tests and other procedures. Where individual authors are listed, the views expressed may not reflect those of the authors' employers or affiliated institutions.