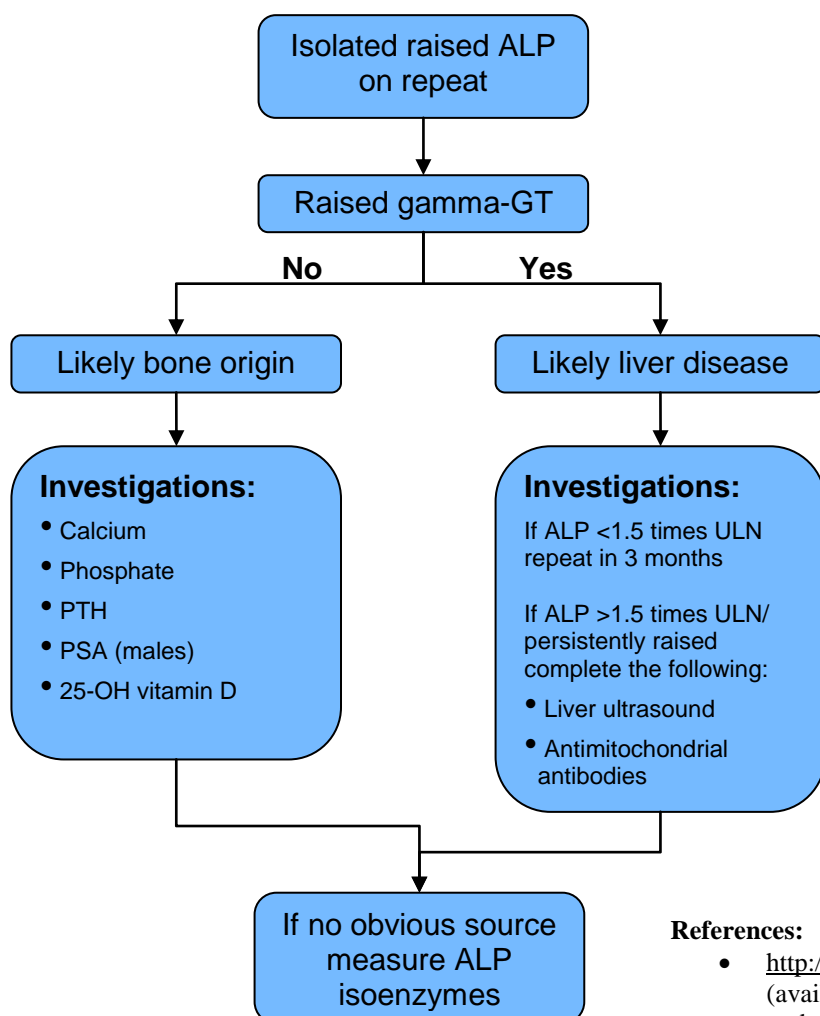


Local guidance on: The investigation of an unexpected, isolated raised alkaline phosphatase (ALP)

- The two main sources of ALP are from liver or bone. However, other sources include intestinal and placental ALP.
- Consider:
 - **Age-** children and adolescents have age related [reference ranges](#), however levels can be slightly higher during a growth spurt
 - **Pregnancy-** up to 2 - 4 fold higher than upper limit of normal (ULN) in third trimester
- The first line of investigation is to determine the source of ALP. Measurement of gamma-GT is suggested and raised levels indicate a hepatic rather than bone origin.
- An isolated raised ALP typically indicates a bone origin, therefore we suggest to follow-up with bone profile and PTH (particularly if the patient has a normal gamma-GT level).
- We suggest using the following algorithm (modified from BMJ and Map of Medicine recommendations):



References:

- <http://www.mapofmedicine.com>. Requires a log-on (available to all healthcare professionals). Once logged in, under Department select Medicine>Hepatology>Abnormal liver tests>Abnormal liver function tests
- Shipman KE et al. Interpreting an isolated raised serum alkaline phosphatase level in an asymptomatic patient. *BMJ*. 2013 Apr 3; 346: f976. <http://www.bmj.com/content/346/bmj.f976>
- ACB Venture Publications. Primary Care and Laboratory Medicine. 2010.