

Highlights:

1. Male NAFLD patients with more severe liver histology have a higher prevalence of low weight-adjusted appendicular skeletal muscle (ASM%).
2. Presence of low ASM% is strongly associated with more severe histological features of NAFLD.
3. The carriage of G allele of *PNPLA3* rs738409 is associated with more severe histological features of NAFLD, especially in the presence of a low ASM%.