**Conclusions**

- Semaglutide and lanifibranor reduce body weight, plasma liver ALT and liver lipids.
- Semaglutide and lanifibranor demonstrate >22-point significant improvement in NAFLD Activity Score.
- Semaglutide and lanifibranor reduce quantitative histological markers of steatosis, inflammation and stellate cell activation.
- Lanifibranor demonstrate 1-point significant improvement in Fibrosis Stage.
- Lanifibranor reduce quantitative histological marker of fibrosis.
- Semaglutide and lanifibranor demonstrate transcriptionic effects on fibrosis-associated genes.
- These findings are in agreement with clinical findings, further highlighting clinical translatable of the GAN DIO-NASH mouse model.