Science Hub

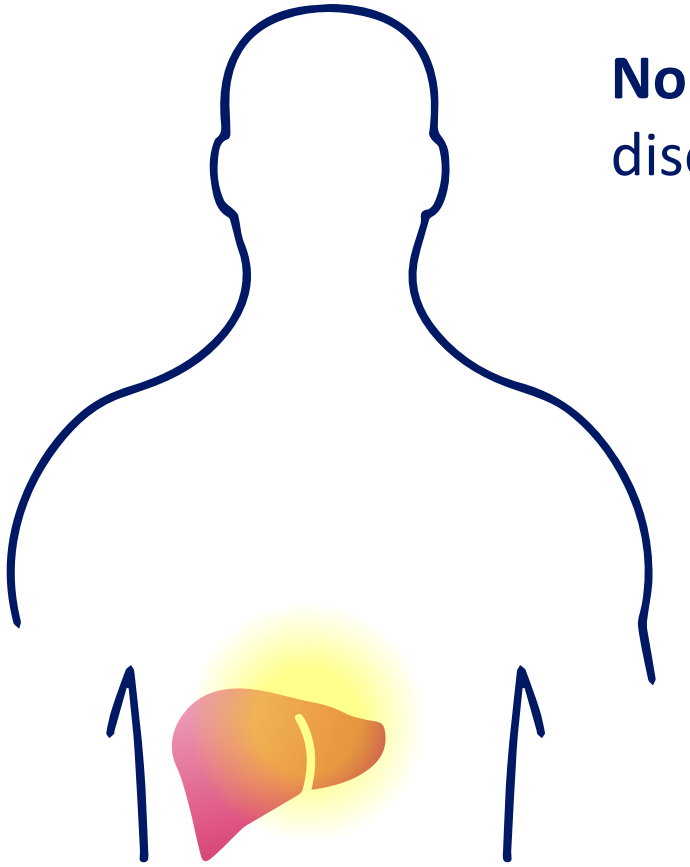
Synopsis of the original article ‘A Placebo-Controlled Trial of Subcutaneous Semaglutide in Non-alcoholic Steatohepatitis’

Newsome PN et al. N Engl J Med. 2020 Nov 13

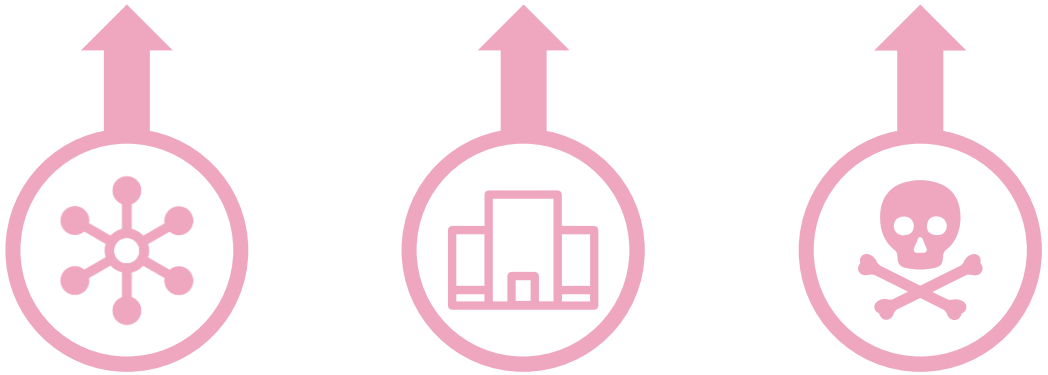
Synopsis created and reviewed by Novo Nordisk

© 2021 Novo Nordisk A/S; Further reproduction and distribution is permitted

Introduction



Non-alcoholic steatohepatitis (NASH) is a common liver disease that is associated with:[1–3]



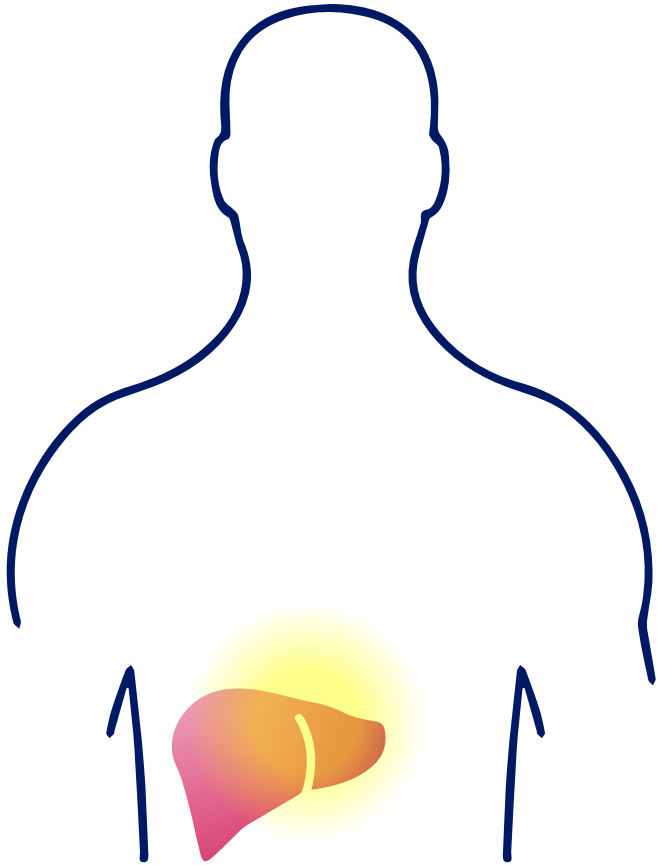
Treatment options are limited

1. Chalasani N, et al. Hepatology 2018;67:328–357; 2. Musso G, et al. PLoS Med 2014;11:e1001680–e1001680; 3. Sheka AC, et al. JAMA 2020;323:1175–1183.

© 2021 Novo Nordisk A/S
Further reproduction and distribution is permitted

Science Hub
SCIENCEHUB.NOVONORDISK.COM

Introduction



The efficacy and safety of the glucagon-like peptide-1 receptor agonist semaglutide in patients with NASH was investigated in this phase 2 trial[1]

1. Newsome PN, et al. N Engl J Med. 2020 Nov 13. doi: 10.1056/NEJMoa2028395.

© 2021 Novo Nordisk A/S
Further reproduction and distribution is permitted

Trial design: double-blind phase 2 trial[1]

Science Hub

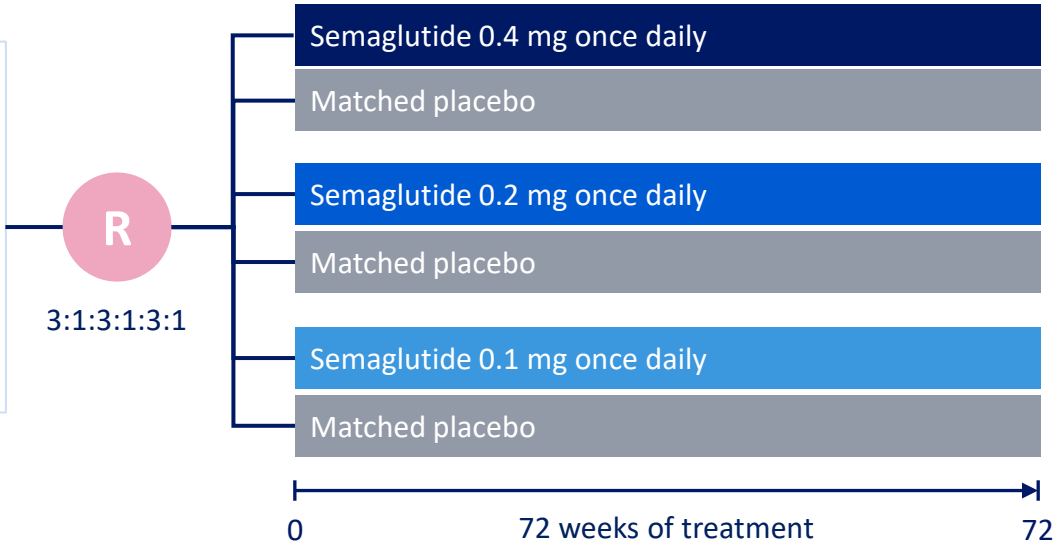
Trial objective

To compare the effect of three different doses of subcutaneous (s.c.) semaglutide once daily versus placebo on histological resolution of NASH

Eligible patients

Biopsy confirmed NASH

Fibrosis stage 1, 2 or 3



Primary endpoint

Resolution of NASH and no worsening in liver fibrosis in patients with baseline fibrosis stage 2 or 3

Confirmatory secondary endpoint

Improvement of at least one fibrosis stage with no worsening of NASH with baseline fibrosis stage 2 or 3

1. Newsome PN, et al. N Engl J Med. 2020 Nov 13. doi: 10.1056/NEJMoa2028395.

© 2021 Novo Nordisk A/S
Further reproduction and distribution is permitted

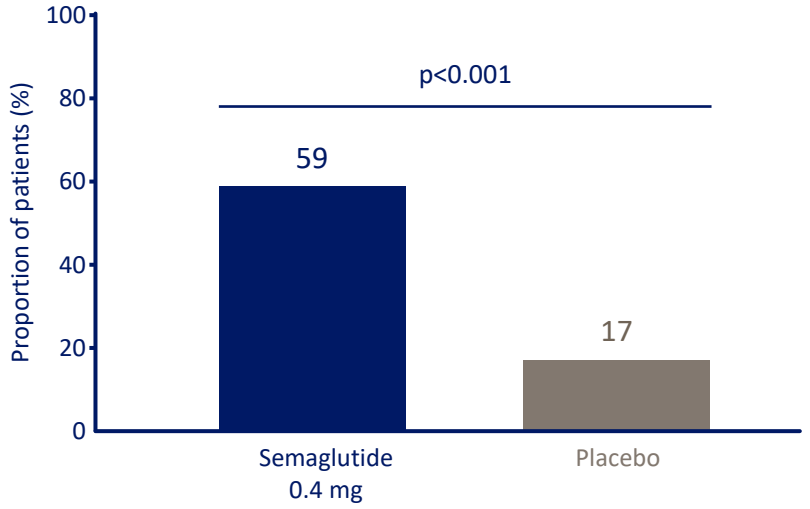
SCIENCEHUB.NOVONORDISK.COM

Effect of semaglutide on liver fat, liver stiffness and body weight[1]

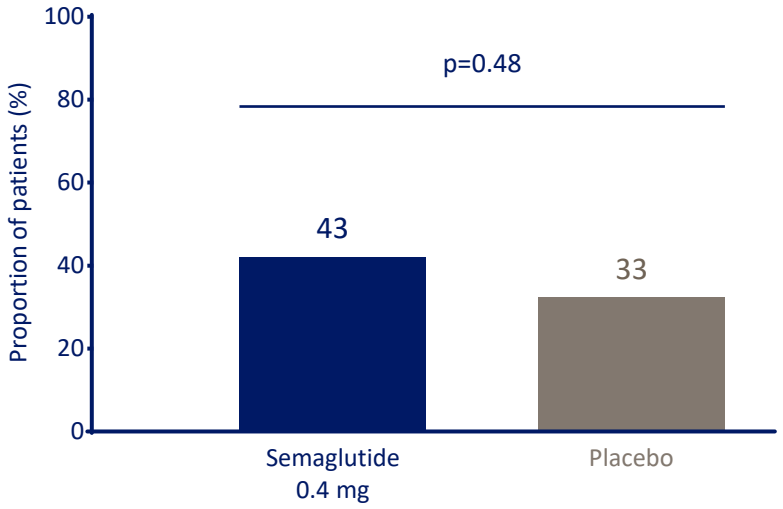
Science Hub

Patients with fibrosis stage 2 or 3 at baseline

Resolution of NASH and without worsening of fibrosis



Improvement in fibrosis stage



Mean percent weight loss was 13% in the 0.4-mg group and 1% in the placebo group

Data based on in-trial period. Two-sided p-values from a Cochran-Mantel-Haenszel test. Patients with missing data handled as non-responders. p<0.05 signifies statistical significance.

1. Newsome PN, et al. N Engl J Med. 2020 Nov 13. doi: 10.1056/NEJMoa2028395.

© 2021 Novo Nordisk A/S
Further reproduction and distribution is permitted

SCIENCEHUB.NOVONORDISK.COM

Conclusions[1]

Compared with placebo, semaglutide resulted in:



Higher percentage of patients achieving NASH resolution without worsening of fibrosis



Numerically, but not significantly, higher percentage of patients with improvement in fibrosis



Greater reduction in body weight



Higher incidence of nausea, constipation, and vomiting

1. Newsome PN, et al. N Engl J Med. 2020 Nov 13. doi: 10.1056/NEJMoa2028395.

© 2021 Novo Nordisk A/S
Further reproduction and distribution is permitted

Science Hub
SCIENCEHUB.NOVONORDISK.COM