Treatment with Once-Weekly Semaglutide 2.4 mg Improves Cardiovascular Risk Factors in Adults with Overweight/Obesity and Type 2 Diabetes: STEP 2 Post-hoc Analysis

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Figure 1: STEP 2 design: a randomised, double-blind, multicentre, placebo-controlled trial

<table>
<thead>
<tr>
<th>Total population</th>
<th>58.0</th>
<th>56.0</th>
<th>62.1</th>
<th>26.2</th>
<th>12.3</th>
<th>Mean, HbA1c (% mmol/L)</th>
<th>8.1 (9.0)</th>
<th>Mean, BMI, kg/m²</th>
<th>46.0 (15.0)</th>
<th>Mean, waist circumference, cm (inches)</th>
<th>114.6 (45.1)</th>
</tr>
</thead>
</table>

Table 1: Demographics and baseline characteristics

**Aim**
- To further explore the effect of semaglutide 2.4 mg vs 1.0 mg and placebo on key cardiovascular risk factors (CRF) in the Semaglutide Treatment Program in People with Obesity (STEP) 2 trial.
- Post-hoc analyses were conducted to explore whether the magnitude of weight loss affected cardiovascular risk factors.

**Introduction**
- Over 60% of people with type 2 diabetes (T2D) have overweight/obesity.
- Weight loss has been shown to improve glycemic control and reverse diabetes progression in people with established disease.
- The glargine prodrug receptor agonist (SGLT-1) subcutaneous (sc) semaglutide at a dose of 1.0 mg is being investigated for obesity pharmacotherapy in the STEP programme.

**Methods**
- Eligibility criteria for STEP 2 participants included:
  - Male or female aged ≥18 years old, with body mass index ≥27 kg/m² and ≥5.0% body weight reduction (BW) recommended.
  - T2D managed with diet and exercise, or with stable dose of oral glucose-lowering agents (metformin, sulfonylureas, sodium-glucose co-transporter 2 inhibitors, or thiazolidinediones).
  - 21 self-reported successful dietary effort to lose weight.
  - Patients were randomised to semaglutide 1.0 mg, 2.4 mg, or placebo for 68 weeks (Figure 1).

**Results**
- At baseline, patients had a mean age of 55 years, body weight of 91.9 kg, HbA1c ≥6.5, and diabetes duration of 8 years (Table 1). BMI was on average ≥40 kg/m² in all treatment groups.

**Conclusion**
- In adults with overweight/obesity and T2D, weight loss was greater with semaglutide 2.4 mg vs semaglutide 1.0 mg and placebo, with more patients achieving weight loss > 10% with the highest dose of semaglutide.
- Greater improvements in cardiovascular risk factors were seen with semaglutide 2.4 mg compared with placebo.
- Results for all cardiovascular risk factors were more favourable in people with ≥10% weight loss than in those with losses of <10%.

**References**