UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 6-K

Report of Foreign Private Issuer Pursuant to Rule 13a-16 or 15d-16
Under the Securities Exchange Act of 1934

For the Month of February 2025

Commission File Number: 001-41084

NeuroSense Therapeutics Ltd.
(Translation of registrant's name into English)

11 HaMenofim Street, Building B
Herzliya 4672562 Israel
+972-9-7996183
(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F ☒ Form 40-F ☐

NeuroSense Therapeutics Ltd. (the "Company") reports additional findings from its completed 18-month Phase 2b PARADIGM study evaluating PrimeC in Amyotrophic Lateral Sclerosis (ALS).

The Company previously reported ALSFRS-R and overall survival in the Intent to Treat population. Additional results from the 18-month PARADIGM study read-out are presented in the table below, including new data from the pre-defined Per Protocol outcomes and two additional endpoints, Complication-free survival and Slow Vital Capacity (SVC).

Disease progression is measured by the ALS Functional Rating Scale-Revised (ALSFRS-R), which is the most widely used ALS tracking tool accepted by the FDA, utilized by neurologists treating ALS patients, in clinical trials, and by other regulators to determine disease progression. It tracks 12 changes in a person's physical abilities over time including functions such as: speech, walking, climbing stairs, dressing/hygiene, handwriting, turning in bed, cutting food, salivation, swallowing, and breathing. A single point change on the ALSFRS-R has a significant impact on ALS patients, such as the transition from independent feeding to requiring assistance or independent breathing to needing to use a machine ventilator.

Complication-free survival is an analysis which includes death from any cause or respiratory insufficiency or hospitalization due to ALS-related complications, while SVC measures the respiratory function of the patient.

All endpoints below illustrate the positive impact of PrimeC by showing the differences between participants who initially received PrimeC and those who initially received a placebo before transitioning to PrimeC.

Endpoints	Per Protocol	Intent to Treat
ALSFRS-R	39% (p=0.001)	33% (p=0.007)
Overall survival	74% (p=0.02)	58% (p=0.11)
Complication-free survival	79% (p<0.001)	64% (p=0.02)
Slow Vital Capacity	26% (p=0.1)	19% (p=0.22)

This Report on Form 6-K is hereby incorporated by reference into registrant's Registration Statements on Form S-8 (File No. 333-262480) and Form F-3 (File No. 333-269306, 333-260338, 333-283656 and 333-284051), to be a part thereof from the date on which this report is submitted, to the extent not superseded by documents or reports subsequently filed or furnished.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NeuroSense Therapeutics Ltd.

Date: February 19, 2025

By: /s/ Alon Ben-Noon
Alon Ben-Noon
Chief Executive Officer