

0027 - SOMAPACITAN IN CHILDREN AND ADOLESCENTS WITH NOONAN SYNDROME: 2-YEAR REAL8 RESULTS INCLUDING SWITCH FROM DAILY GH

Mode: Research paper

Thematic Unit: Growth

DE LIMA JORGE, Alexander¹ | ALBANESE, Assunta² | HØJBY, Michael³ | EDOUARD, Thomas⁴ | GRANDONE, Anna⁵ | SOLTYSIK, Kamil³ | TANSEY, Michael⁶ | YAO, Hui⁷ | MORI, Jun⁸

HOSPITAL DAS CLÍNICAS DA FACULDADE DE MEDICINA DA UNIVERSIDADE DE SÃO PAULO (HC-FMUSP)¹; ST GEORGE'S UNIVERSITY HOSPITALS, NHS FOUNDATION TRUST²; NOVO NORDISK³; CHILDREN'S HOSPITAL, TOULOUSE UNIVERSITY HOSPITAL⁴; UNIVERSITY OF CAMPANIA LUIGI VANVITELLI⁵; UNIVERSITY OF IOWA CARVER COLLEGE OF MEDICINE⁶; HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY⁷; CHILDREN'S MEDICAL CENTER, OSAKA CITY GENERAL HOSPITAL⁸

Background/Objectives: Treating short stature in Noonan syndrome (NS) with daily growth hormone (GH) injections can be burdensome for patients and caregivers. Somapacitan is a long-acting human GH derivative for once-weekly subcutaneous administration. Somapacitan showed similar efficacy and safety to daily GH in children with NS in the REAL8 (NCT05330325) study at 52 weeks and has been FDA-approved as a treatment for this indication. This study evaluates 104-week efficacy and safety of once-weekly somapacitan in NS.

Methods: REAL8 is a multinational, open-label study. 77 children with NS (39% female) aged 2.5-11.0 years were randomised 2:1 to somapacitan 0.24 mg/kg/week (soma-soma) or daily GH 0.050 mg/kg/day (GH-soma) for 52 weeks, with all participants switching or continuing to somapacitan for weeks 52-104. Efficacy endpoints included annualized height velocity (HV), height SDS (HSDS), and IGF-I SDS. Safety outcomes included adverse events (AEs) and injection-site reactions (ISRs). Treatment preference was assessed at week 65.

Results: 48 (98.0%) soma-soma and 27 (96.4%) GH-soma participants received somapacitan in weeks 52-104. HV was comparable between groups with a mean (SD) observed HV (cm/year) at week 52 of 10.4 (1.6) and 9.3 (2.3) and at week 104 of 8.0 (1.0) and 8.3 (1.4) in soma-soma and GH-soma groups, respectively. Mean HSDS improved from baseline to weeks 52 and 104 in both soma-soma (-2.75; -1.69; -1.24) and GH-soma (-2.62; -1.83; -1.34) groups. Model-based IGF-I average SDS mean (SD) increased from week 52 to 104 in the GH-soma switch group (0.56 [0.84] to 1.19 [0.55]) and was sustained in soma-soma group (1.23 [0.97] to 1.37 [0.97]). In GH-soma participants switching to soma, 92.0% preferred somapacitan and 84.0% expected better adherence versus daily GH. Somapacitan was well-tolerated, and



no new safety issues were identified. AE rates (per 100 patient-years) were lower in weeks 52-104 than weeks 0-52 (soma-soma 291.3 vs 515.2; GH-soma 219.0 vs 496.5). ISRs were reported across weeks 52-104 in 2 (4.2%) and 2 (7.4%) participants from soma-soma and GH-soma groups, respectively.

Conclusion: Participants received somapacitan for a 52-week extension phase realised continued growth benefits following a 52-week main phase receiving either somapacitan or daily GH. Once-weekly somapacitan has safety profile similar to daily GH, is well-tolerated, and preferred by caregivers of children with NS, providing an effective treatment alternative in this population.

