SUNFISH Part 2: 24-month efficacy and safety of risdiplam in patients with Type 2 or non-ambulant Type 3 spinal muscular atrophy (SMA)

**Abstract**

Type 2 and non-ambulant Type 3 spinal muscular atrophy (SMA) is a genetic neurodegenerative disease that results in progressive muscle weakness and atrophy. The SUNFISH Part 2 trial evaluated the efficacy and safety of risdiplam in patients with Type 2 or non-ambulant Type 3 SMA. Risdiplam is the first oral tropomyosin-repeat-containing protein kinase B activator approved for people with SMA, based on evidence from a phase 2 study and a phase 3 study (SUNFISH Part 1). Risdiplam was administered at a dose of 4 mg/kg by mouth once daily for 24 months. The study included patients aged 2–25 years old with Type 2 or non-ambulant Type 3 SMA, and the primary endpoint was change from baseline to Month 24 in upper limb total scores (≥1 on item 9 of the Motor Function Measure-32). The gains observed with risdiplam treatment were maintained during the second year of treatment. These results are an important milestone in the development of therapies for SMA and represent a potential new treatment option for patients with Type 2 or non-ambulant Type 3 SMA.

**Conclusion**

Risdiplam showed continued improvement and stabilization of SMA ISQ scores from baseline to Month 24 in patients who switched from placebo to risdiplam (see supplementary materials).

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We would like to thank the individuals with SMA and their families, as well as the investigators and trial staff involved in the SUNFISH study.

**References**

The SMAIS upper limb total score change from adjusted baseline increased or stabilized over 12 months in patients who switched from placebo to risdiplam. Patients in the placebo arm received placebo for 12 months followed by risdiplam treatment for 12 months. Placebo period not shown in this graph.

*±95% CI. Patients in the placebo arm were unblinded for the 12 months following randomization. These data reflect the last assessment prior to the first dose of risdiplam.

Abbreviations

- SMA: spinal muscular atrophy
- SMAIS: SMA Independence Scale
- RULM: Revised Upper Limb Module
- HFMSE: Hammersmith Functional Motor Scale
- NIMH: Neuromyogen Institute
- MFM32: Manual Muscle Test
- MFM-27: Manual Muscle Test
- RMT: Respiratory Muscle Test
- UPP: Upper Limb Power
- RIS: Respiratory and Impulse Sound

Supplementary information – the content below was not in the poster presented at Cure SMA 2021 but is available via a QR code