EFFECT OF SAPROPTERIN DIHYDROCHLORIDE ON IQ PRESERVATION IN CHILDREN (AGED 0-6 YEARS) WITH PHENYLKETONURIA

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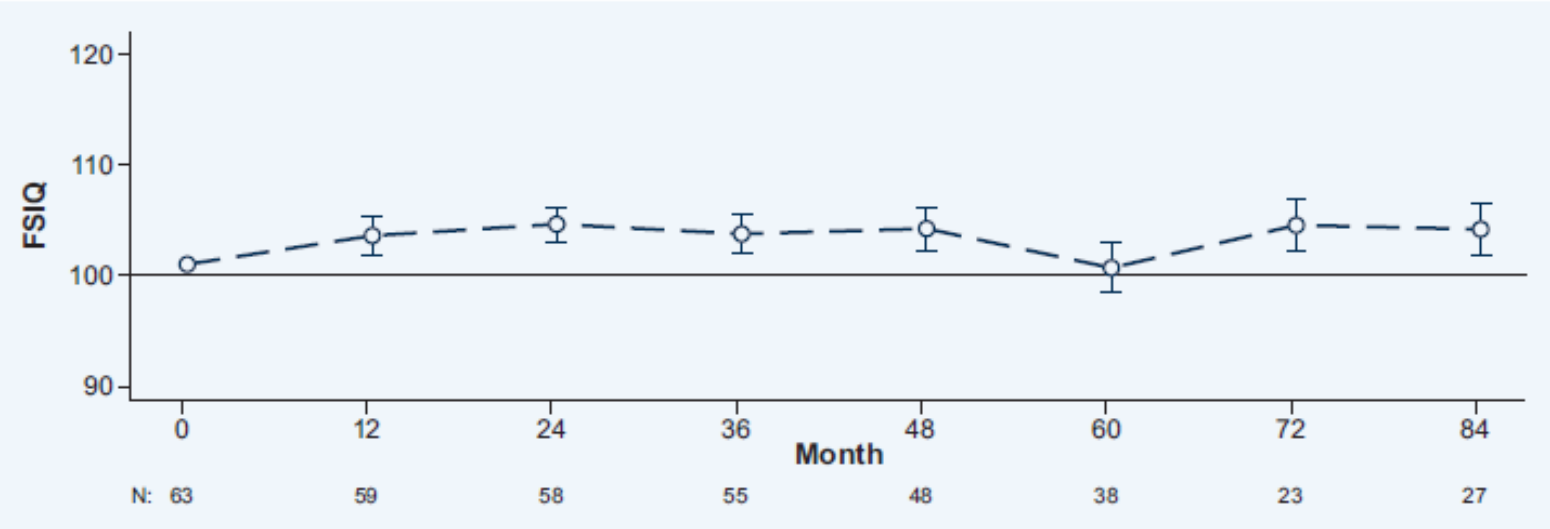
This study (PKU-015) was a phase 3b, open-label study to evaluate the effect of sapropterin dihydrochloride (Kuvan®) on neurocognitive function, maintenance of blood phenylalanine concentrations, safety, and population pharmacokinetics in young children (aged 0-6 years at enrollment) with phenylketonuria

Results

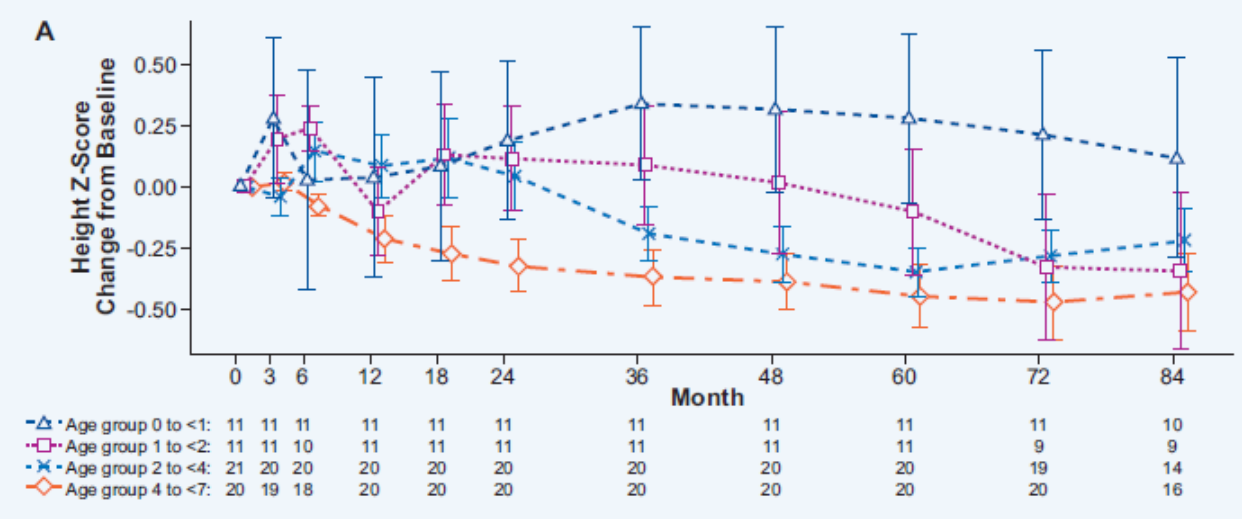
- **Adherence to sapropterin was 99.1% and mean total exposure was 2379.5 days (6.5 years) with a maximum duration of 7.1 years**
- **Mean blood Phe levels remained within guideline-recommended ranges, in all age groups, for the duration of the 7 year study**

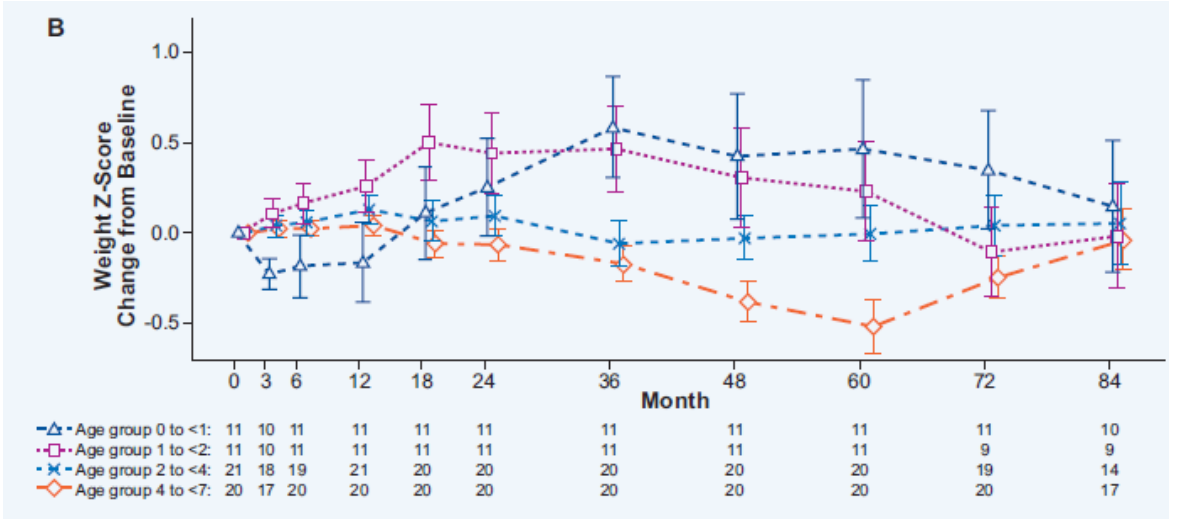
Figure 1. Full Scale Intelligence Quotient (FSIQ) over time – Overall population



- **IQ was assessed in patients older than 2.5y**
- **Preservation of FSIQ was demonstrated, with the lower confidence limit of the LS mean change from baseline over the course of the study being -1.6 points, well within the range of usual variability, and meeting the primary endpoint**

Figure 2. Z-Score by visit for height (A) and weight (B) over 7 years (84 months)





- Growth was maintained within expected percentiles over seven years for height (Fig. 2A), weight (Fig. 2B), and head circumference (not shown)
- Sapropterin was well tolerated in all age groups and there were no new safety signals identified

Conclusions

- In BH4-responsive participants who initiated therapy between 0–6 years of age, long-term use of sapropterin, in concert with a Phe-restricted diet, was associated with preserved IQ, normal growth, and a favorable safety profile