BACKGROUND/MOTIVATION:
Neurocognitive and language deficits are known developmental sequelae for a large number of children with galactosaemia (GAL). While behavioural assessment batteries are important indicators of a child's developmental status, technology-assisted language assessments, such as event-related potential (ERP) recordings can provide on-line information on a child's neural language processing efficiency. Such on-line information may contribute to the understanding of the evolution of the neurocognitive and language phenotype in GAL.

METHOD
The current study relied on event-related potential recordings during a semantic priming paradigm in order to assess neural language processing efficiency in a 7-year old female with GAL to complement behavioural language and neurocognitive findings. Performance measures were compared to those from a small control group using statistical and descriptive measures.

RESULTS
On behavioural language and neurocognitive outcomes, there were no statistically significant measures that differentiated the child with GAL from the control group.
ERP results point towards deviations in auditory word processing in the child with GAL, relative to her peers. The child with GAL appeared to require increased neural resources to integrate an auditory word with its pictorial presentation, as indicated by a larger N400 ERP component measured in response to congruent prime-target picture-word pairs.

DISCUSSION/IMPLICATION

Whilst the child with GAL presented with behavioural language and neurocognitive skills on par with her peers, deviations in auditory word processing were noted. Such deviations may interfere with the child’s ongoing language development and her academic outcomes, given the changing nature of classroom instruction as children progress through the school years.