

# **The Debate About Linear vs. Non-Linear Approaches For Cancer and Different Approaches for Developing Non-Cancer Toxicity Benchmarks: Practical Implications and Why It's Important to Get It Right**

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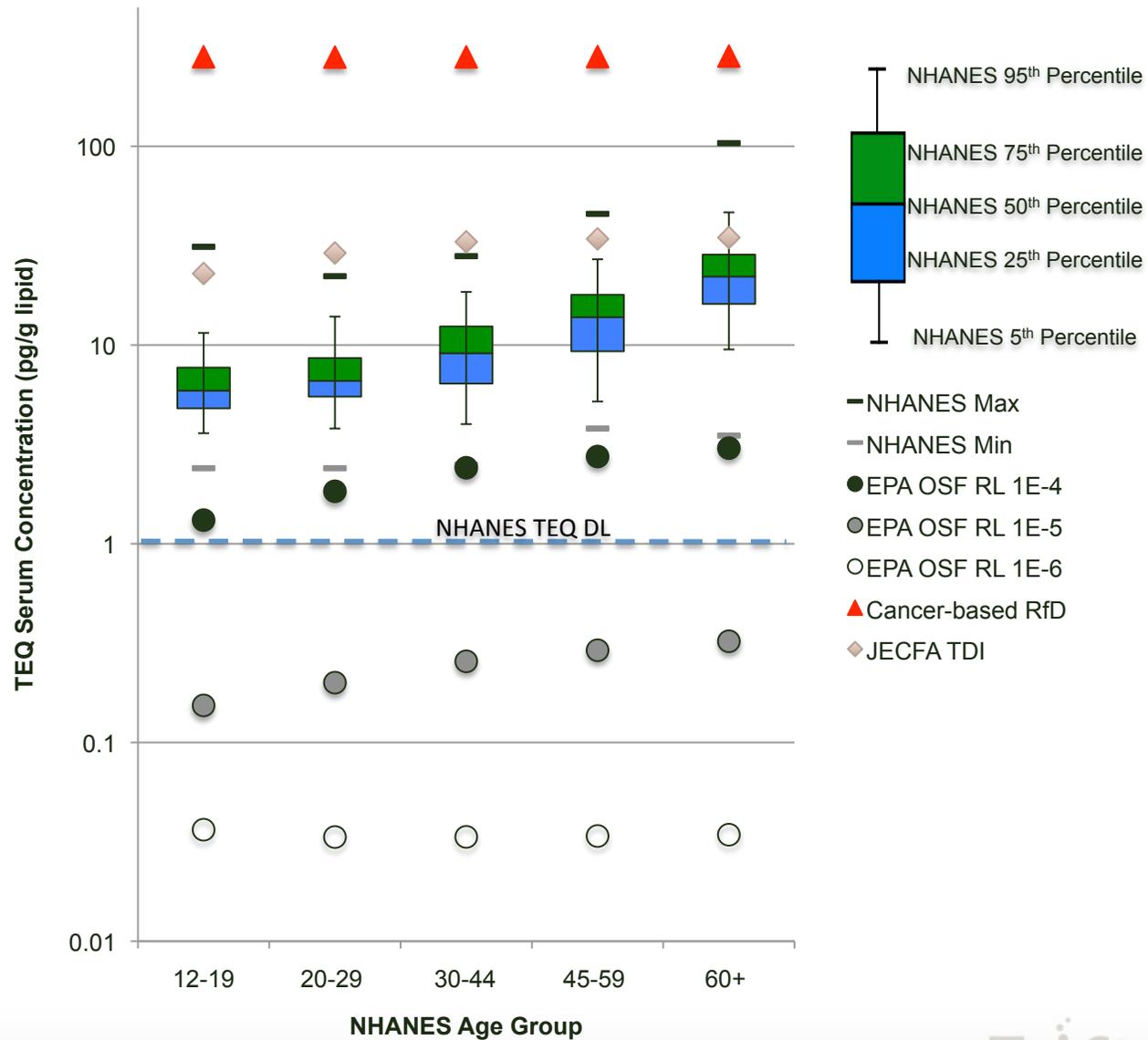
Comments to the USEPA Science Advisory Board Dioxin Review Panel

October 27, 2010

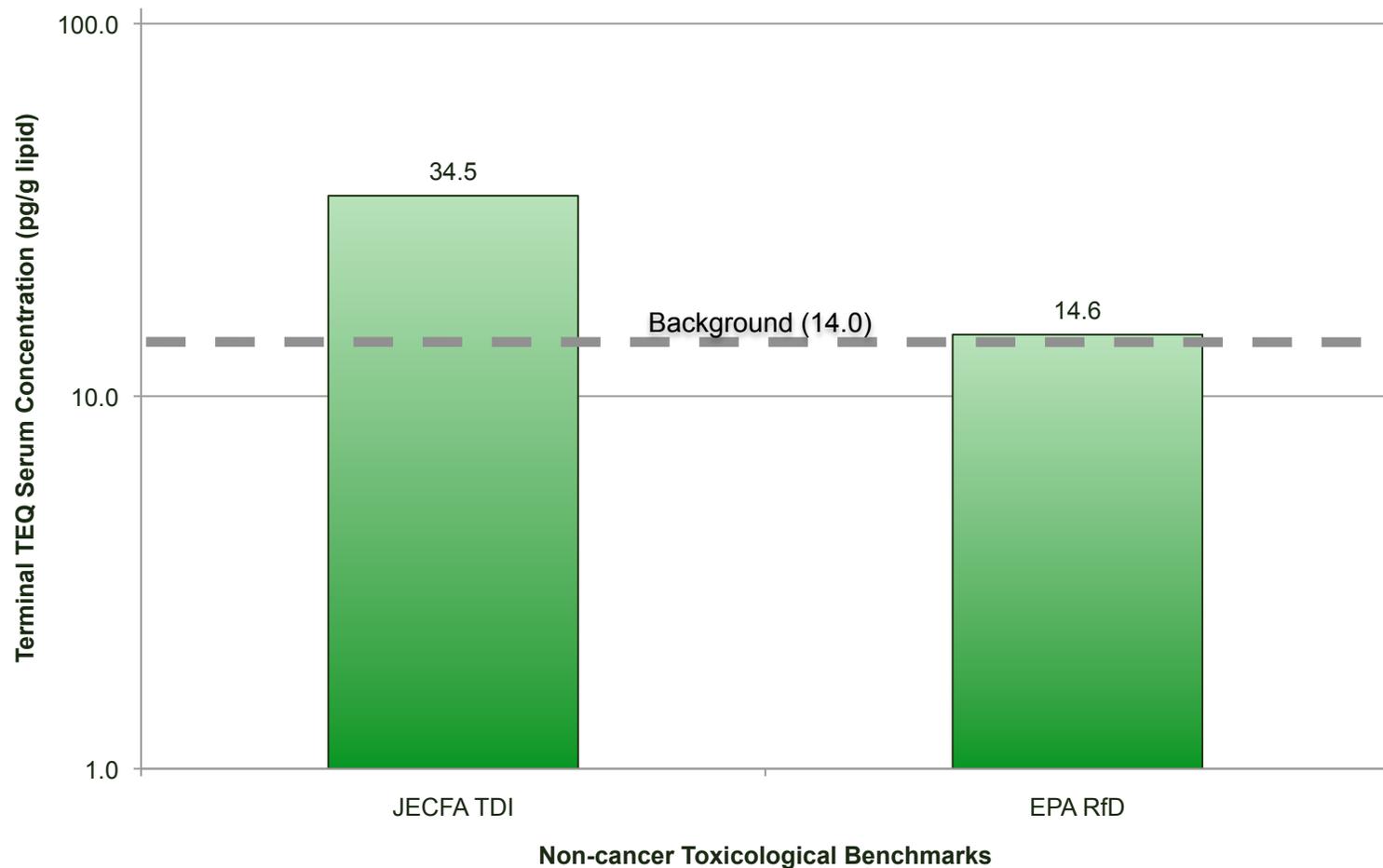
*Comments Prepared On Behalf of US Magnesium*

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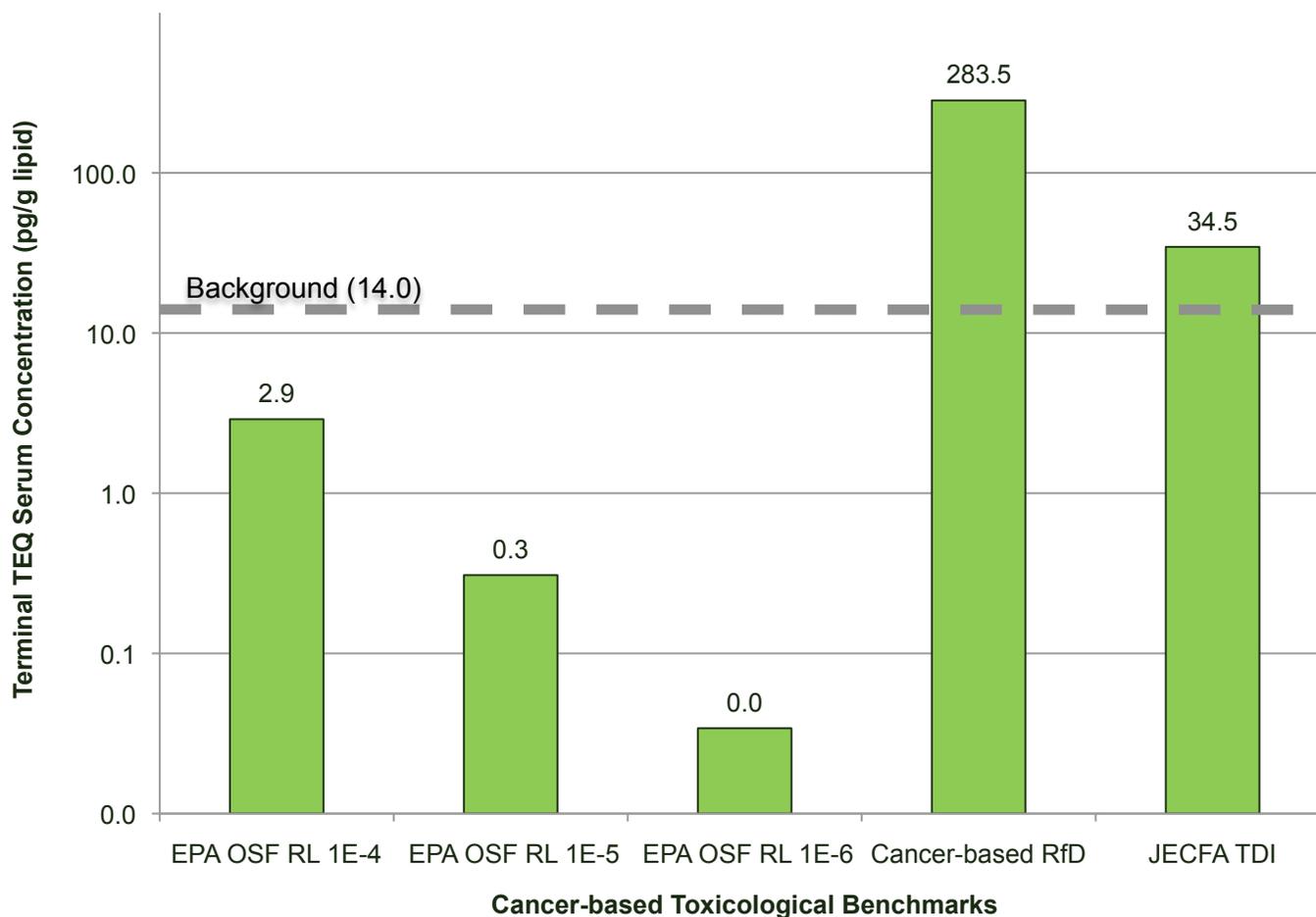
# Serum concentrations associated with cancer benchmarks (EPA OSF, cancer-based RfD, JECFA TDI) vs. serum concentrations observed in the general U.S. population (NHANES 03/04)



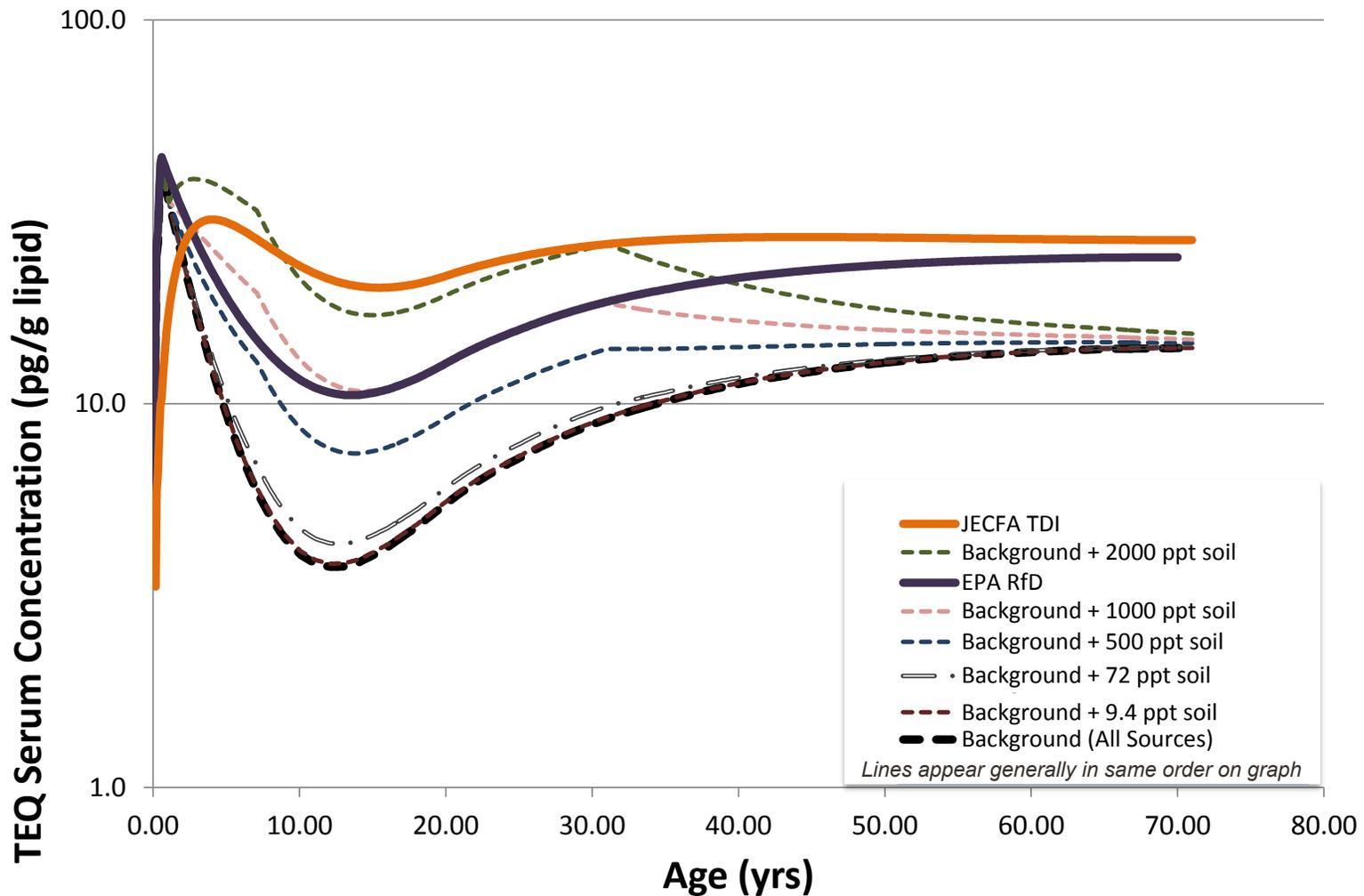
Serum concentrations associated with lifetime exposure to non-cancer benchmarks (EPA RfD and JECFA TDI) vs. serum concentration resulting from lifetime exposure to background sources (in utero+breast milk+diet+soil+air)



Serum concentrations associated with lifetime exposure to cancer benchmarks (EPA OSF, cancer-based RfD, JECFA TDI) vs. serum concentration resulting from lifetime exposure to background sources (in utero+breast milk+diet +soil+air)



Serum concentrations associated with non-cancer benchmarks (EPA RfD and JECFA TDI) vs. serum concentration resulting from exposure to dioxins in soils (concentrations ranging from 9.4 to 2000 ppt)



**Serum concentrations associated with cancer benchmarks (EPA OSF, cancer-based RfD, JECFA TDI) vs. serum concentration resulting from exposure to dioxins in soils (concentrations ranging from 3.7 to 2000 ppt)**

