Comparing Human Observational Studies with Clinical Findings: The Half-life of Perfluorooctanoate (PFOA)

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Disparity in the results from human observational and clinical studies is not uncommon. Unfortunately, current risk assessment efforts often emphasize judging one set of data as being more relevant than the other, often with the concomitant loss of valuable information. The safe dose assessment for PFOA is a good example of this problem. The estimation of safe doses for PFOA and related chemistries is disparate world wide due in part to differences in understanding of the half-life of these chemicals in humans (Mikkonen et al., 2020). These differences in half-life are likewise disparate, due in part to incomplete information on sources of exposure, which until recently were not well understood. Exposure information is thus critical in understanding, and possibly resolving, this conundrum in PFOA safe dose, and potentially for similar disparities with other chemistries when both human observational and clinical findings are available.