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Empirical Comparisons of the Signal-to-Noise Crossover Dose and the Benchmark Dose

An important aspect of dose-response analysis is the identification of an appropriate point of departure (PoD) for the development of a human exposure guidelines to toxic substances. Although the benchmark dose (BMD) is the most widely used PoD, estimation of the BMD requiring extrapolation beyond dose range can be model dependent. This limitation is overcome by signal-to-noise crossover dose (SNCD) (Sand et al., 2011). Using toxicological datasets from the US National Toxicology Program (NTP) database, empirical comparisons between the BMD and the SNCD are made, as well between lower confidence limits (BMDL, and SNCDL) on these two PoD's.