NCS Non-Clinical Statistics Conference
Padua, IT / 23 – 25 September 2026

TITLE: Analysing data where groups are completely censored

SPEAKER: David Willé, Joe Watson

ABSTRACT: The literature on statistical analysis methods for censored data is vast, however, problems arise when one or more groups are fully censored; commonplace in nonclinical statistics applications and a result of highly efficacious treatments. Whilst maximum likelihood-based parametric estimation fails in fully censored scenarios, we show how maximum likelihood-based inference remains possible using the likelihood ratio test. In this talk, we provide numerous illustrations; discussing the assumptions and limitations and outline how to implement such methods in R. Finally, connections are made to the analysis of count data where one or more group contain only zero counts.

BRIEF SPEAKER BIO:

Joe Watson is a Statistics Leader at GSK, where he primarily supports nonclinical research into biologics. He previously held positions as a government ecologist studying Killer Whales and in academia at the University of British Columbia developing novel spatio-temporal statistical methods. Joe's current curiosities are developing novel methods for addressing the types of censored data commonplace in nonclinical research.

David Willé: following a PhD in mathematics, and positions at the universities of Manchester and Heidelberg, and IBM in Rome, David first moved into statistics working for Ciba-Geigy in Basel, before supporting field statistics in Novartis Crop Protection and later Syngenta AG. Since joining GSK in 2002 he has supported multiple areas of pre-clinical research including animal studies, computational biology and neurosciences. David currently supports GSK's Global Health programme.