

Authors' Reply to "Statistical Methods for Comparing Methods of Measurement"

To the Editor: First, we would like to thank Pascual-Lledó and colleagues for their comments on our study of the measurement of the fraction of exhaled nitric oxide (FE_{NO}).¹ Their suggestions no doubt improve on those offered in the original study. We would like to make the following points, however. The distribution of the sample was neither strictly Gaussian nor clearly nonnormal according to

the Kolmogorov-Smirnoff test, and it therefore seemed more reasonable to us to leave the readings from the 2 devices in their original scales rather than perform a logarithmic transformation. Furthermore, after such a transformation, it is very difficult to interpret the results, a point we considered very important in our study given that we were investigating whether values with the NIOX-MINO (Aerocrine, Solna, Sweden) were higher than those obtained with our usual N-6008 analyzer (SIR, Madrid, Spain) and understanding the results after transformation would be difficult if one is not used to such scales. Additionally,

the study attempted to demonstrate that, although the FE_{NO} measurements from the NIOX-MINO were always higher than those of the N-6008, there was a certain degree of correlation between them. It was not very important to underline the lack of agreement between the determinations, given that they do not measure on the same scale, but rather to demonstrate that both devices are useful for measuring the same clinical phenomenon. Logically, the values are correlated, but different, as one set is systematically and predictably higher than the other. The final message that we wish to convey is that both measurements are valid for the clinical purpose for which they are used, but that the clinical routines established for interpreting them must change, given that the values and magnitudes of the 2 measurement systems are different. In any case, as the data are in fact available and we can show the distribution of differences requested in order to facilitate understanding of the results, we include the Figure.

**Ana María Fortuna, Teresa Feixas,
and Pere Casan**

Unidad de Función Pulmonar,
Departamento Neumología,
Hospital de la Santa Creu i de Sant Pau,
Facultad de Medicina,
Universidad Autónoma de Barcelona,
Barcelona, Spain

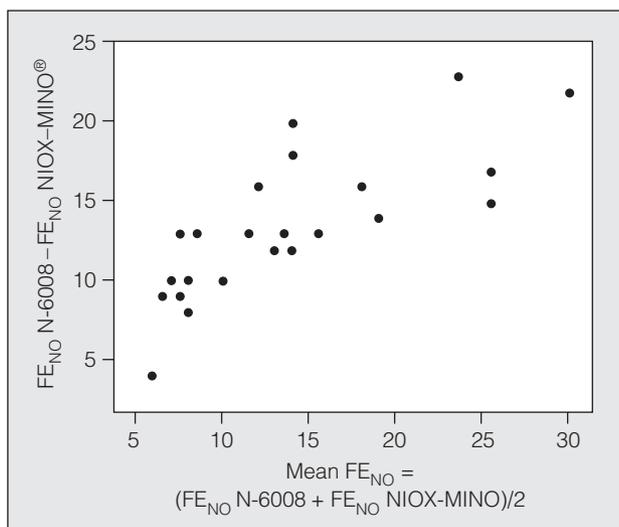


Figure. Bland and Altman plot of the differences between measurements of the fraction of exhaled nitric oxide (FE_{NO}) from the NIOX-MINO (Aerocrine, Solna, Sweden) and the N-6008 (SIR, Madrid, Spain).

1. Fortuna AM, Feixas T, Casan P. Determinación de óxido nítrico en aire espirado (FE_{NO}) mediante un equipo portátil (NIOX-MINO® Aerocrine) en población sana. Arch Bronconeumol. 2007;43:176-9.