Author's response to reviews

Title: Modeling delay to diagnosis for Amiotrophic lateral sclerosis: under reporting and incidence estimates

Authors:

Irene I Rocchetti R (irene.rocchetti@gmail.com)
Domenica D Taruscio T (taruscio@iss.it)
Daniela D Pierannunzio P (daniela.pierannunzio@iss.it)

Version: 2 Date: 13 March 2012

Author's response to reviews:

The paper provides reliable estimate of the incidence rate for Amiotrophic lateral sclerosis (ALS) based only on data from the National Registry of Rare Diseases (NRRD). The NRRD is not complete and does not let matching its information with the ones from other sources; due thus to impossibility of using different sources, common capture recapture estimators cannot be used to estimate the ALS population size. We used a capture method based on survival analysis, following Esbjerg et al. (1999) but adding some new important figures and perspectives to the analysis (onset cohorts strata). Furthermore, this is the first effort in Italy to give approximate incidence estimates for rare diseases such as ALS, trying to account for geographical and demographical heterogeneity. Other possible sources of heterogeneity such as professional status and education have not been considered yet in the analysis given the unreliability of variables present in the dataset to measure them; we propose however as long as the quality of NRRD will improve to account for them as well as to extent the analysis to incorporate latent heterogeneity (i.e. different proneness of individual to be registered, etc.).