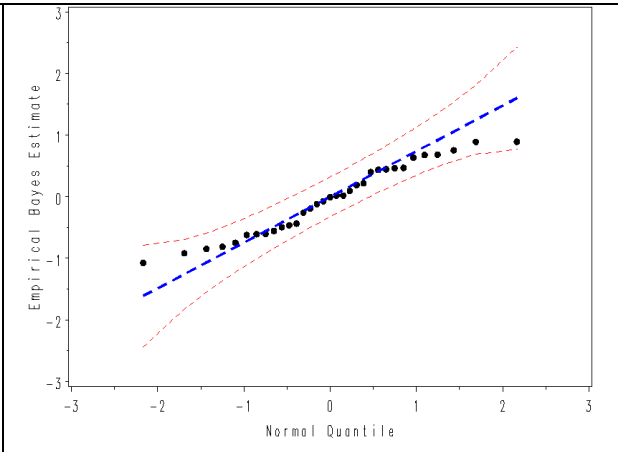
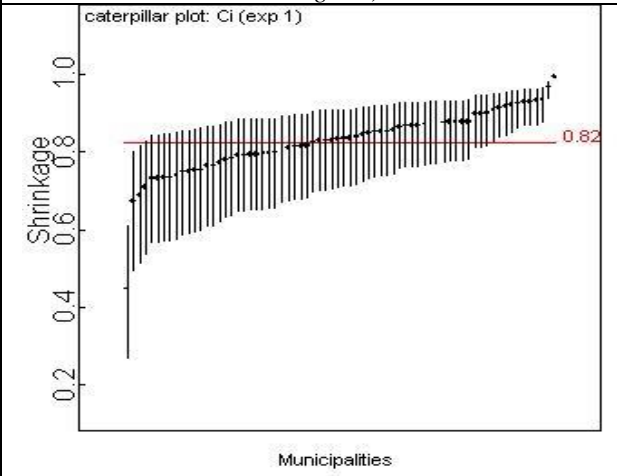


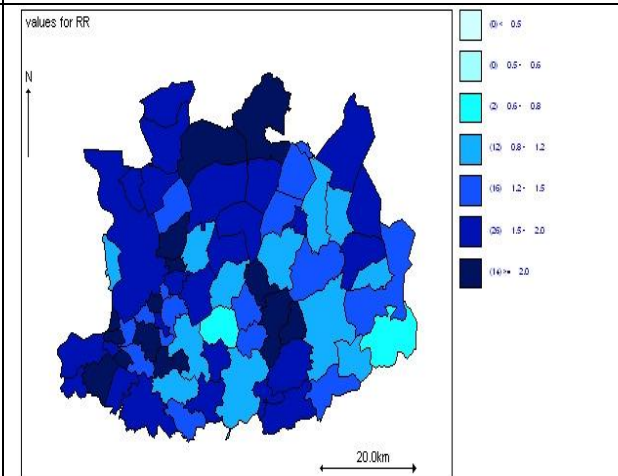
Semivariogram with ‘sine hole effect’ of air pollution data (showing nugget effect) (*proc krige2d, proc variogram*)



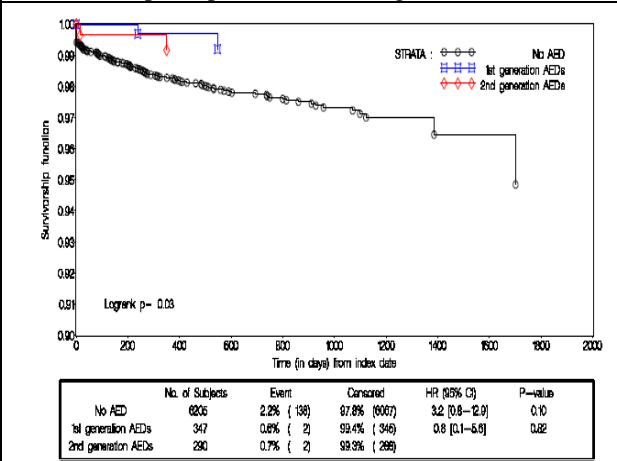
Empirical Bayes *qqplot* ( $\pm 95\%$  CI) of random intercepts



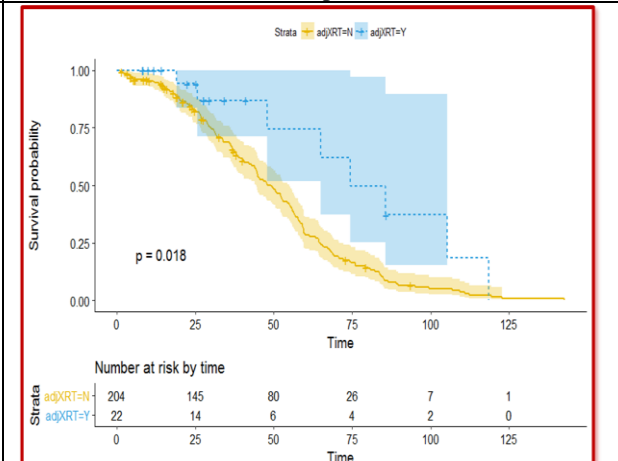
Disease mapping: ‘Bayesian shrinkage’ – ranked caterpillar plot in a Poisson-gamma model



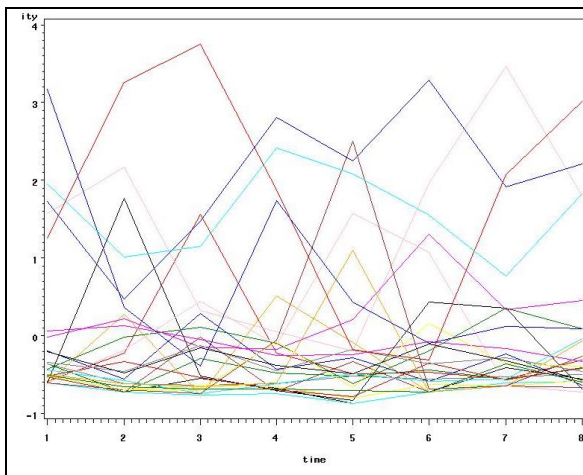
Disease mapping: CAR model of cervix cancer incidence in the Antwerp district (*WinBUGS*)



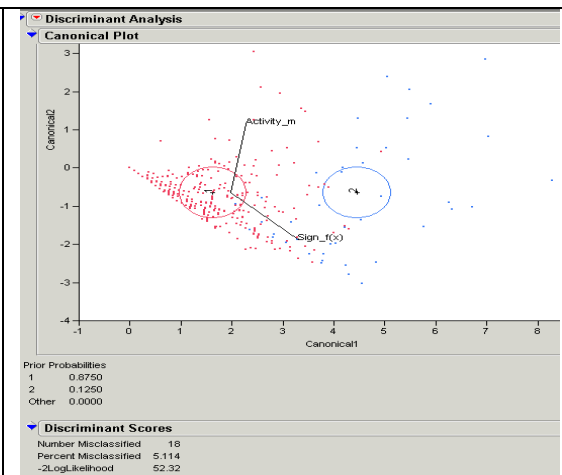
Suicide attempts ↓ with AED (any generation) treatment contrary to FDA alert (unmatched analysis)



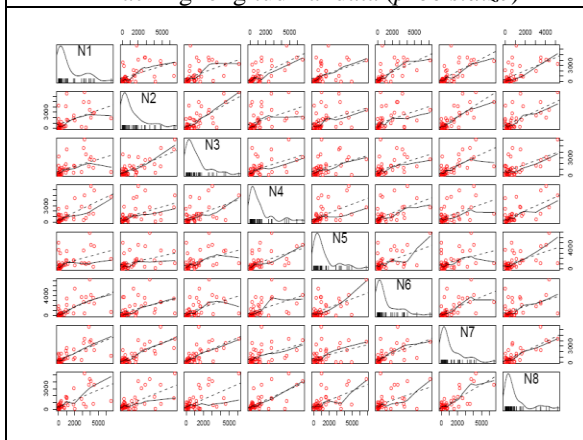
KM plot comparing RTX + CTX treated vs. untreated CRC patients (package *survminer*)



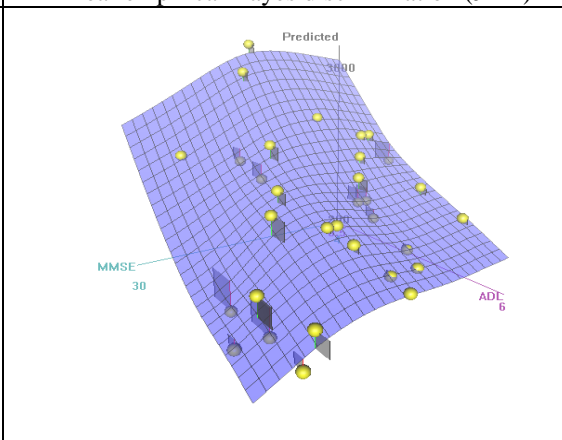
Tracking longitudinal data (*proc stdize*)



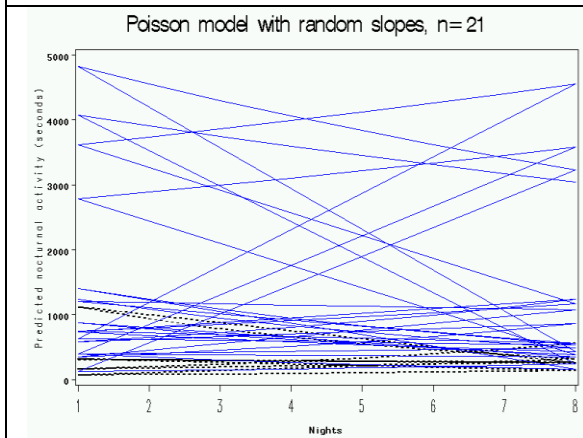
Linear empirical Bayes discrimination (*JMP*)



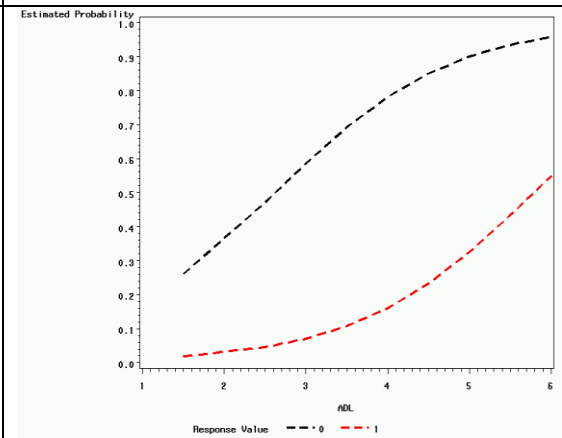
Correlation scatterplot between 8 repeated measurements; with diagonals showing right skewed 'multimodal' distribution



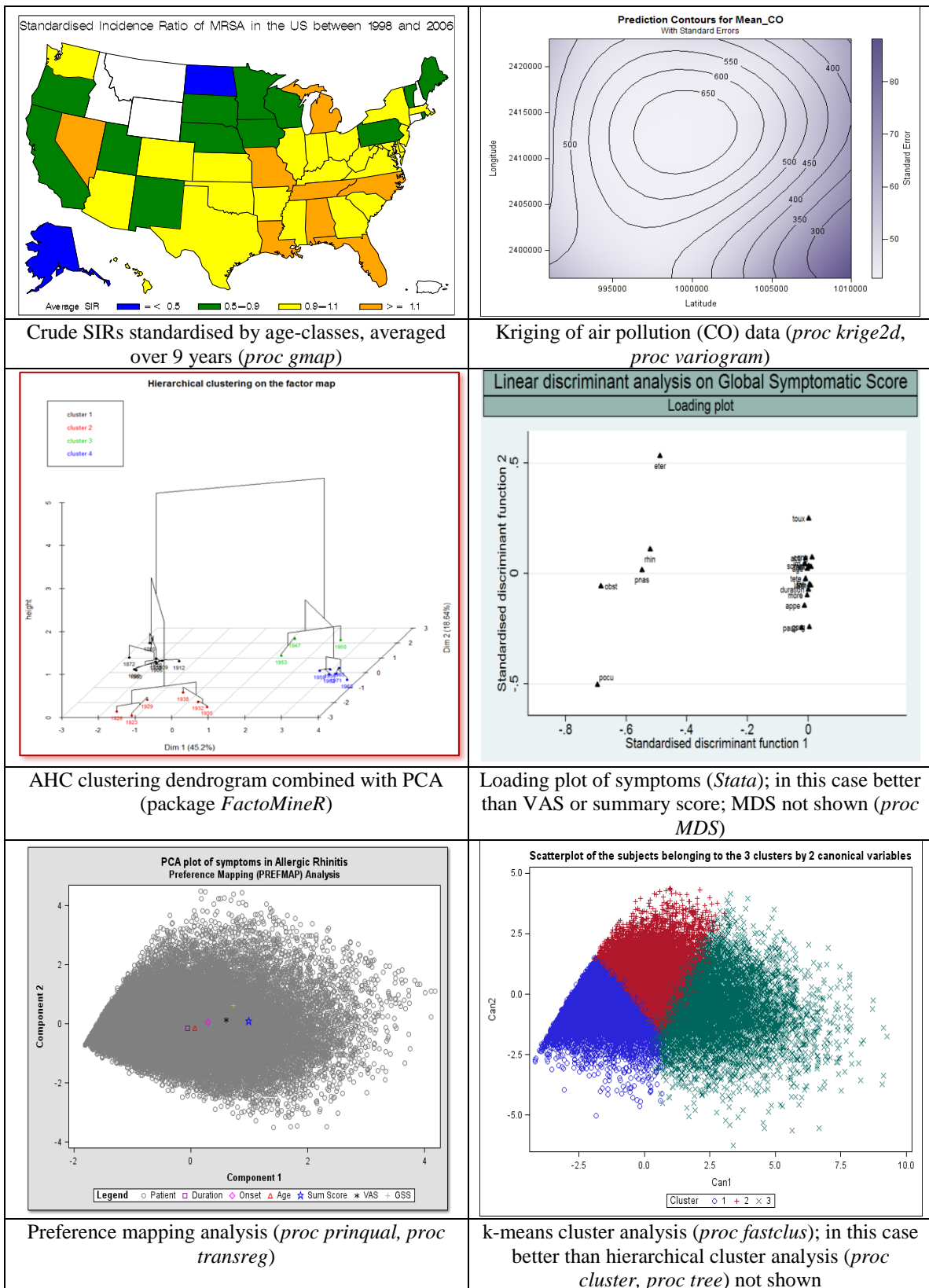
Spline-smoothed predicted response surface with squared residuals (screenshot during 360° rotation)

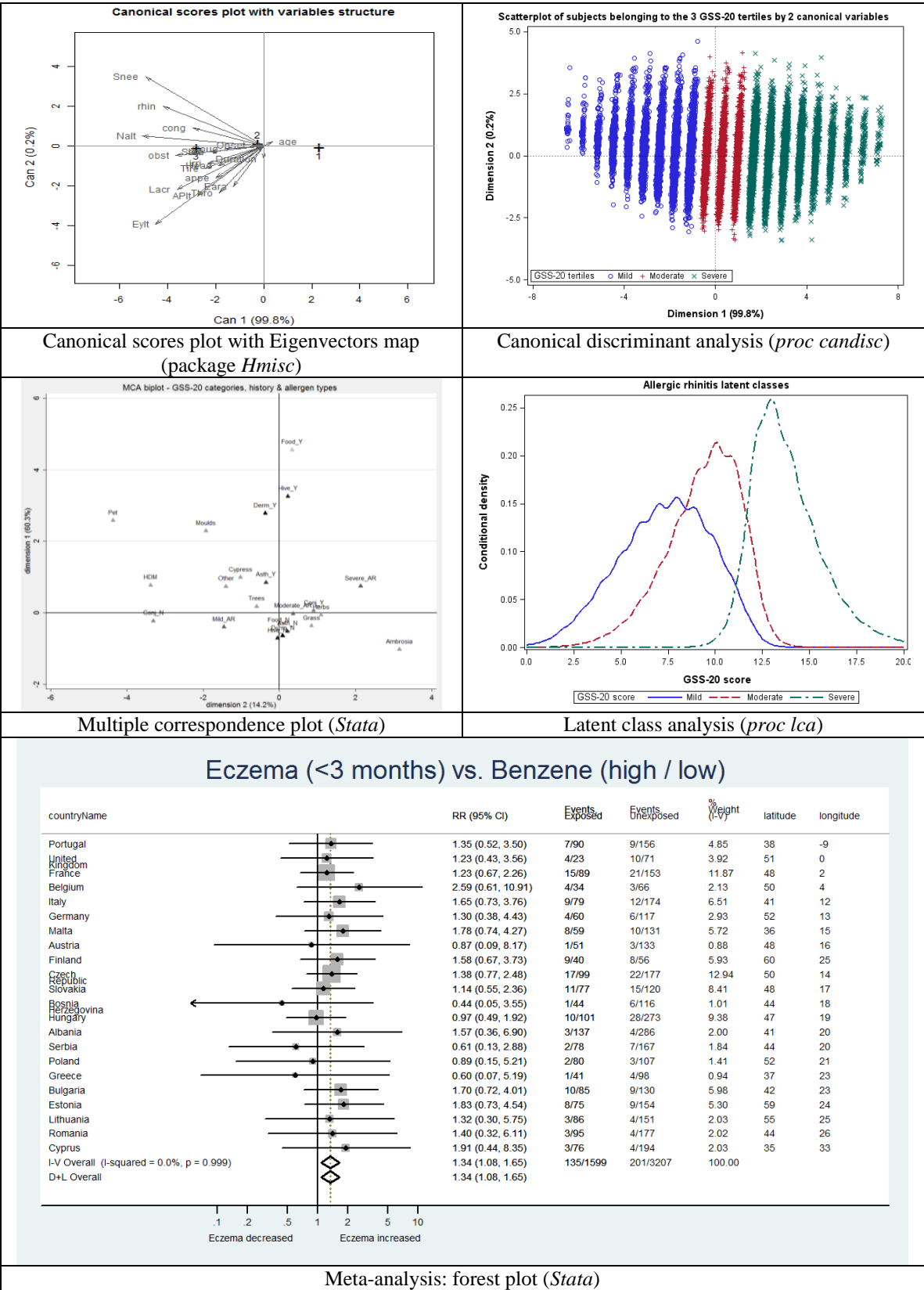


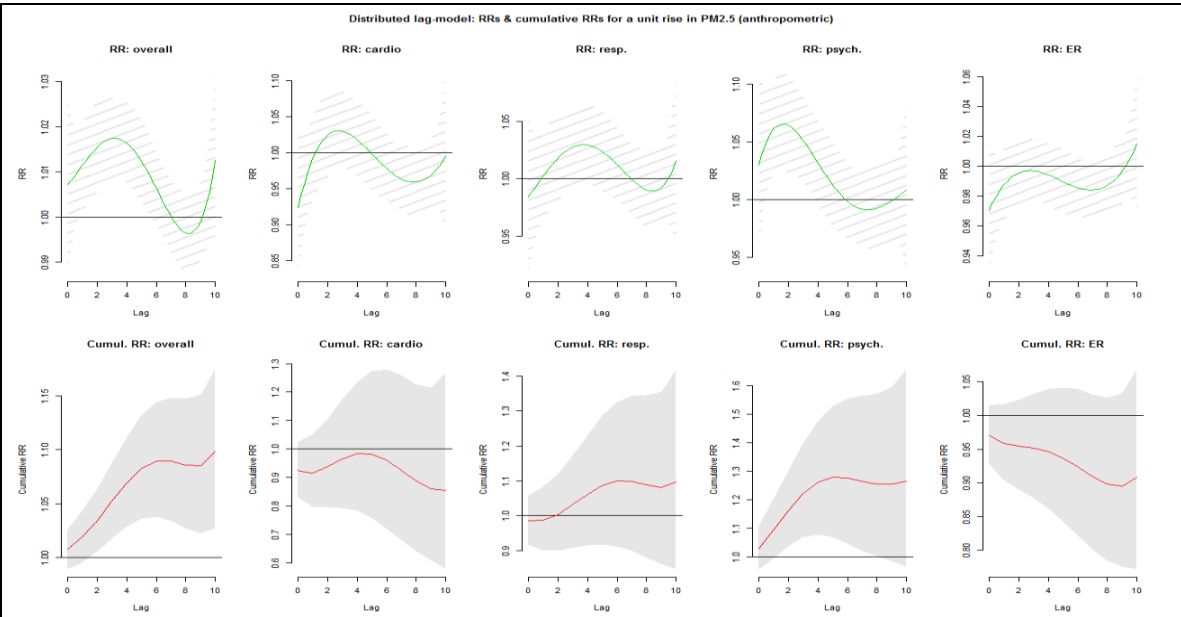
Random slopes by group: Poisson model (*proc nlmixed*)



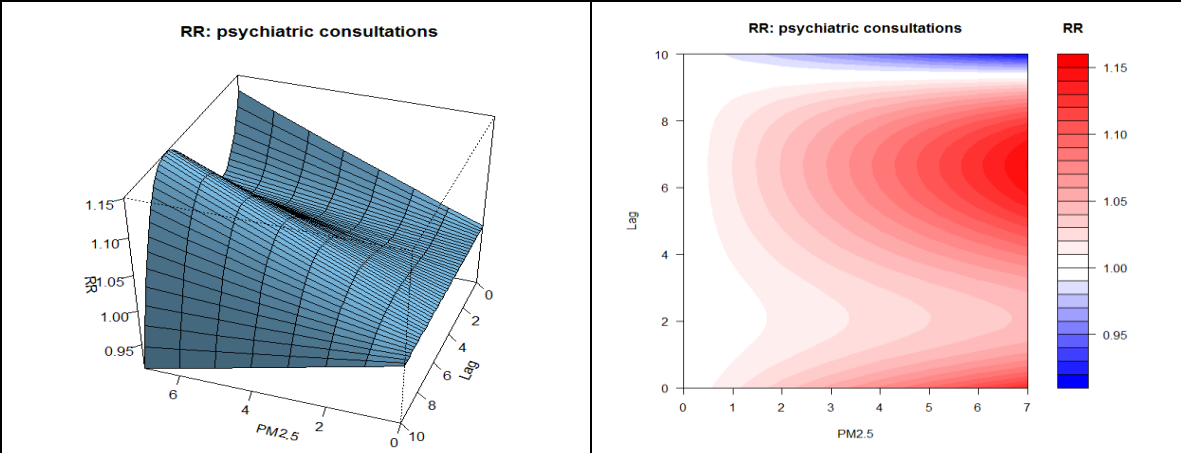
P-O model comparing 3 categories: 'worsening' (red), 'stable' (black) & 'improving' (reference) → subjects have a constant impact (OR) of ADL (exposure) across any level



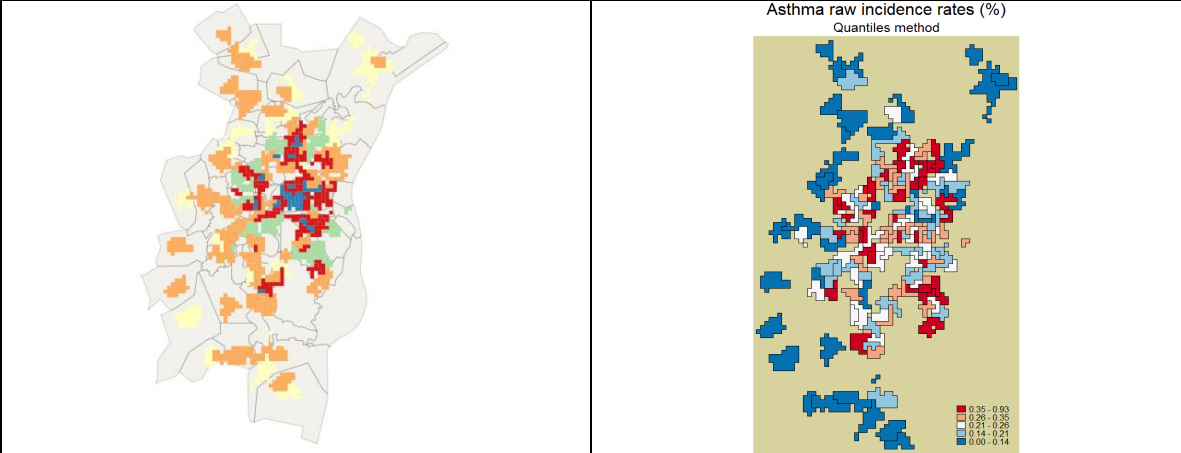




Time-Series Analysis (TSA) with GAMs: Distributed Lag Models (DLM) (package *dlm*)



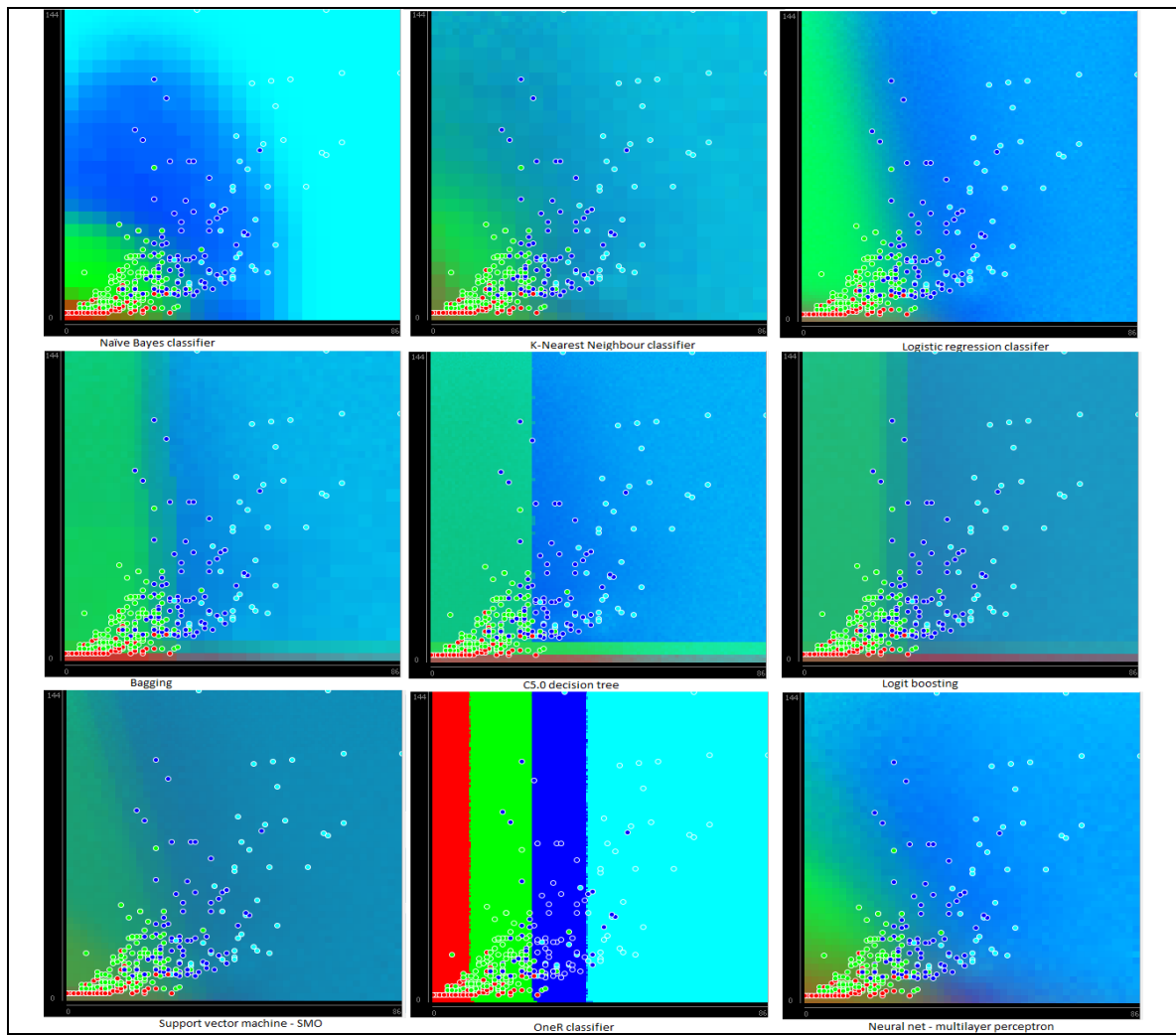
TSA with GAMs: DLM (package *dlm*)



IRIS map overlaid by new zoning map showing neighbourhood deprivation index (*QGIS*)

Raw incidence rates in the new zonings (*Stata*)





Decision boundaries of different classifiers (*Weka*)

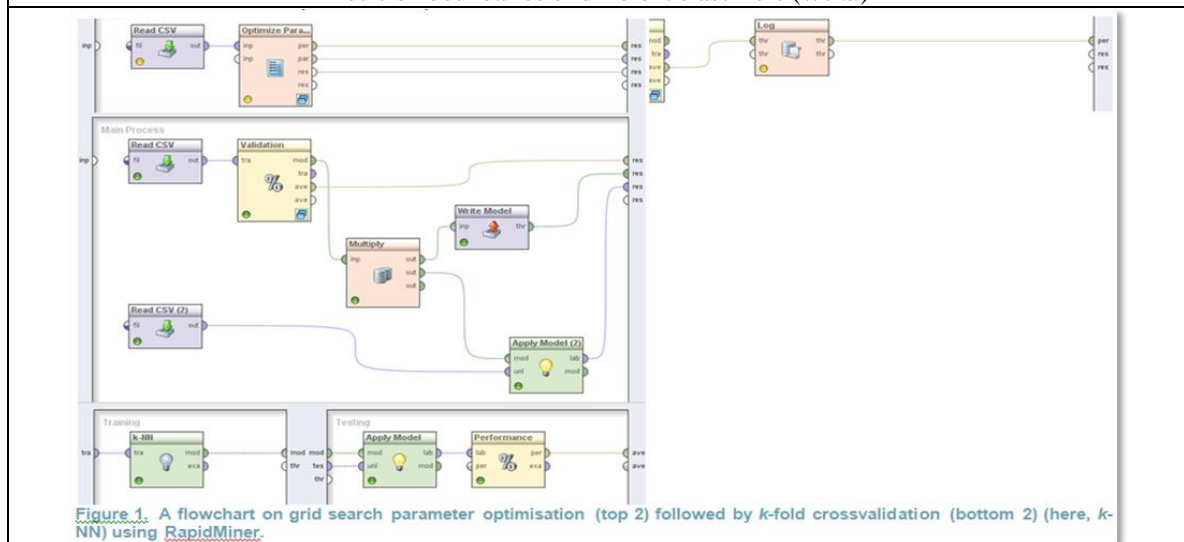
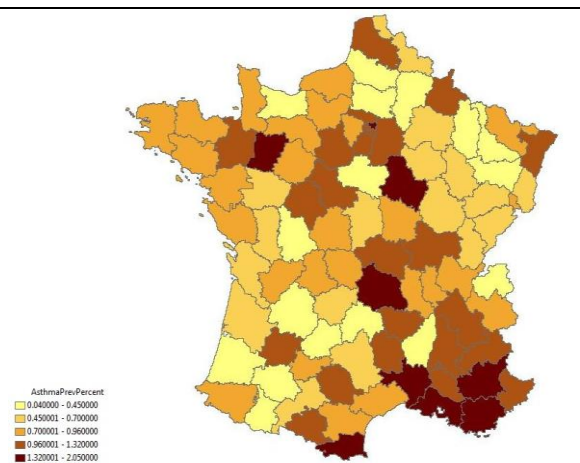
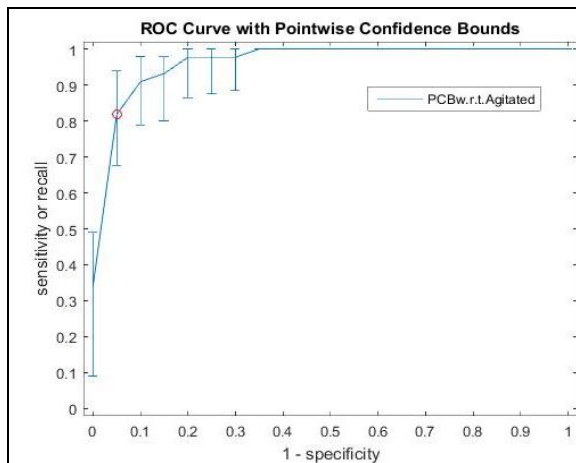


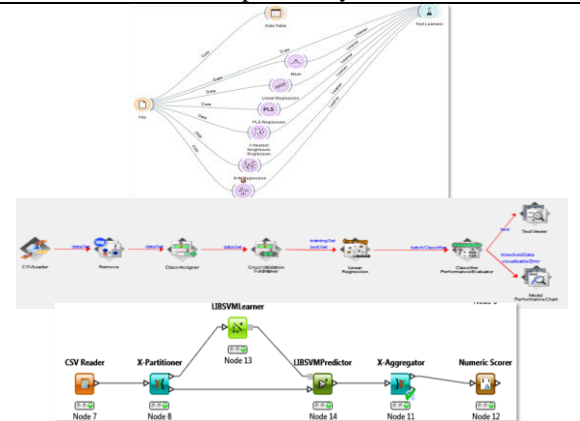
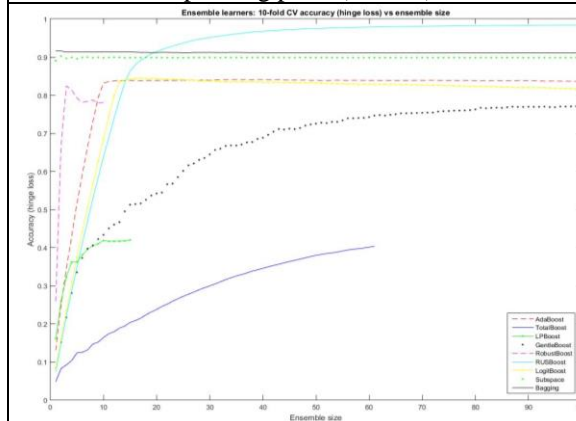
Figure 1. A flowchart on grid search parameter optimisation (top 2) followed by  $k$ -fold crossvalidation (bottom 2) (here,  $k$ -NN) using *RapidMiner*.

Parameter optimisation & predictive modelling flowchart (*RapidMiner*)





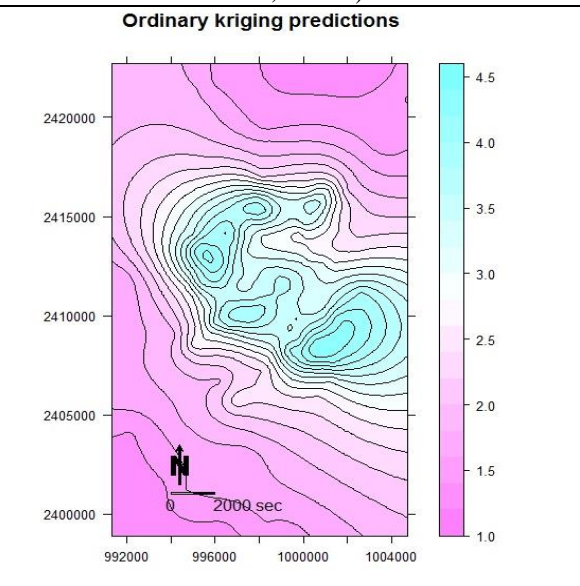
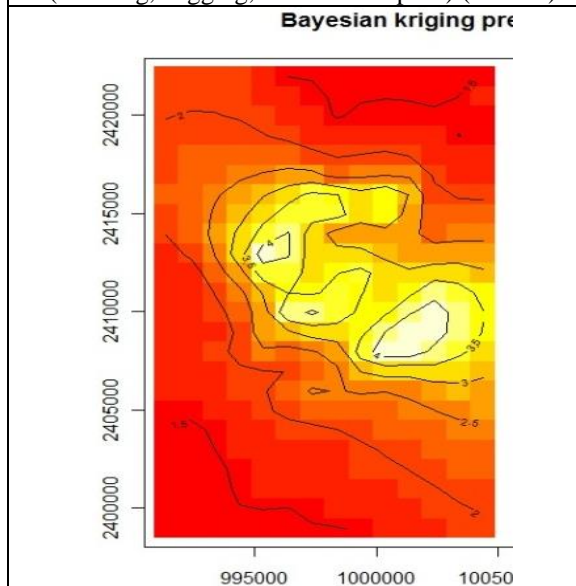
ROC curve with bootstrapped 95% CI & optimal operating point (*Matlab*)



Different ensemble learning methods compared  
(boosting, bagging, random subspace) (*Matlab*)

---

Predictive modelling process flow (*Orange miner*,  
*Weka*, *Knime*)

Bayesian Kriging of SES data (package *sgeostat*)

---

Kriging of SES data (package *gstat*)

