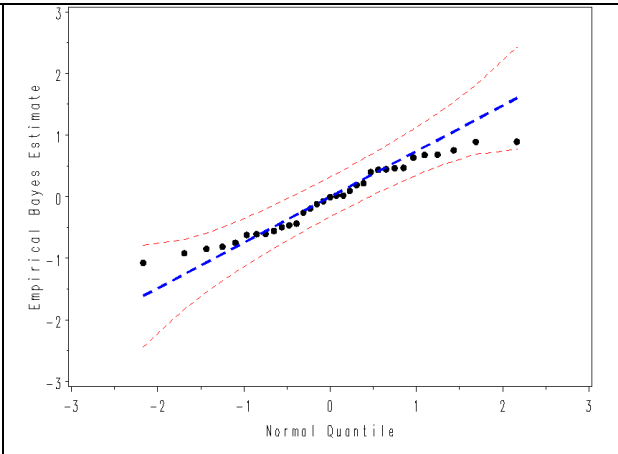
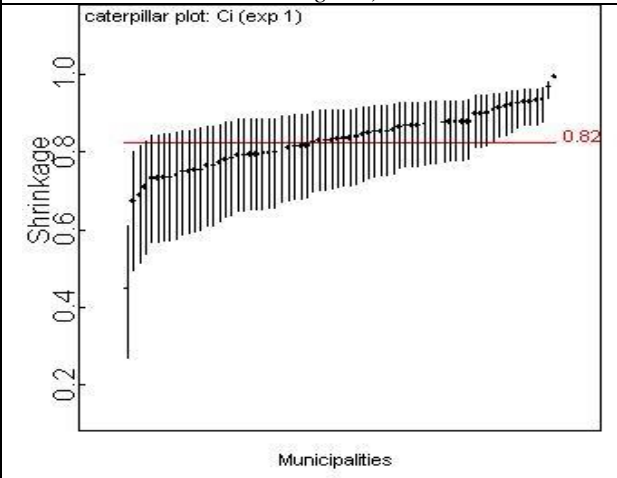


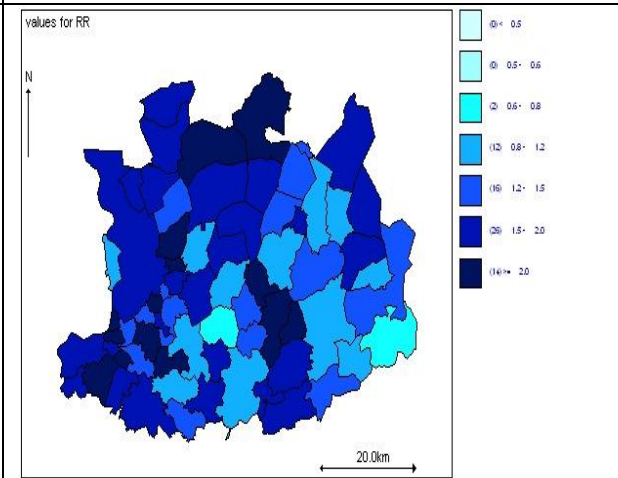
Semivariogram with ‘sine hole effect’ of air pollution data (showing nugget effect) (*proc krige2d, proc variogram*)



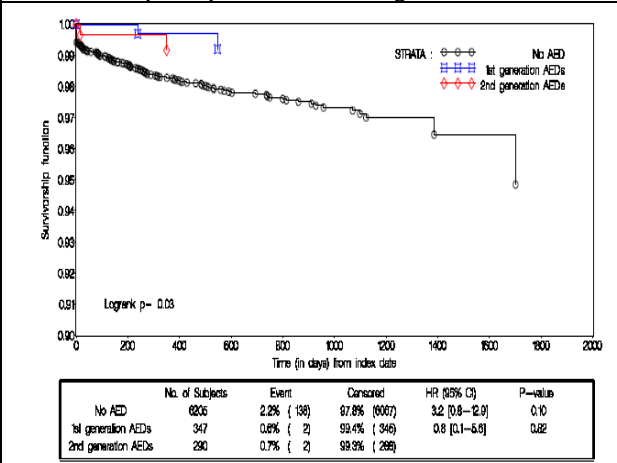
Empirical Bayes *qqplot* ($\pm 95\%$ CI) of random intercepts



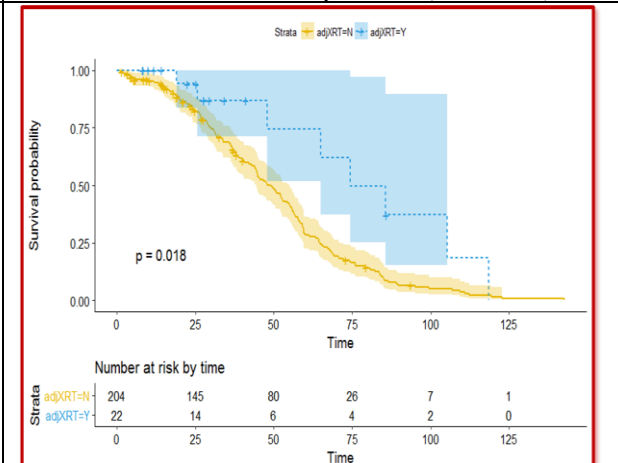
Disease mapping: ‘Bayesian shrinkage’ – ranked caterpillar plot in a Poisson-gamma model



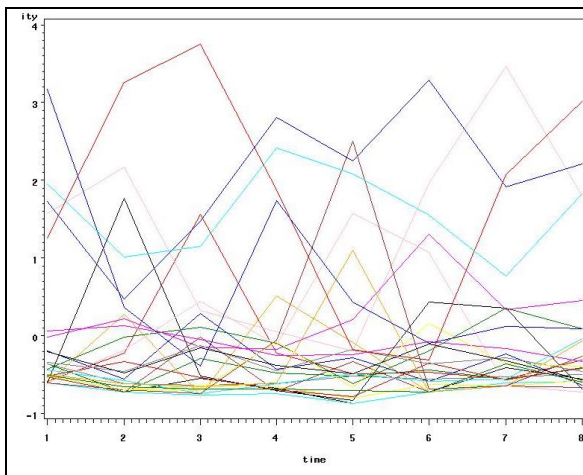
Disease mapping: CAR model of cervix cancer incidence in the Antwerp district (*WinBUGS*)



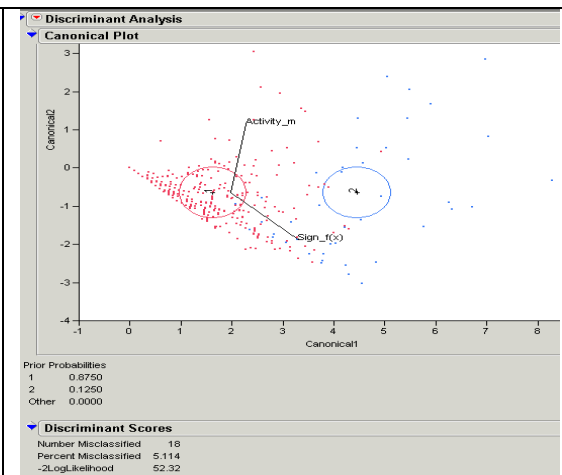
Suicide attempts ↓ with AED (any generation) treatment contrary to FDA alert (unmatched analysis)



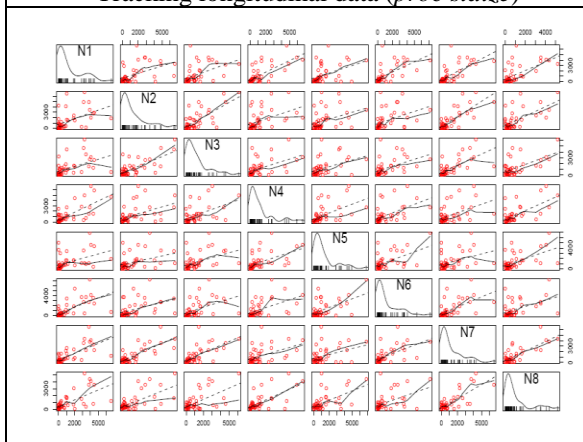
KM plot comparing RTX + CTX treated vs. untreated CRC patients (package *surminer*)



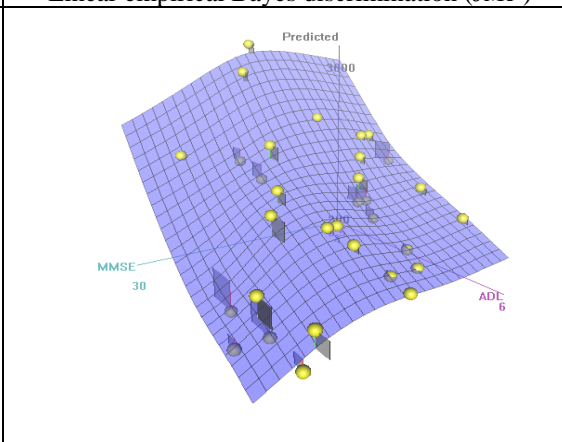
Tracking longitudinal data (*proc stdize*)



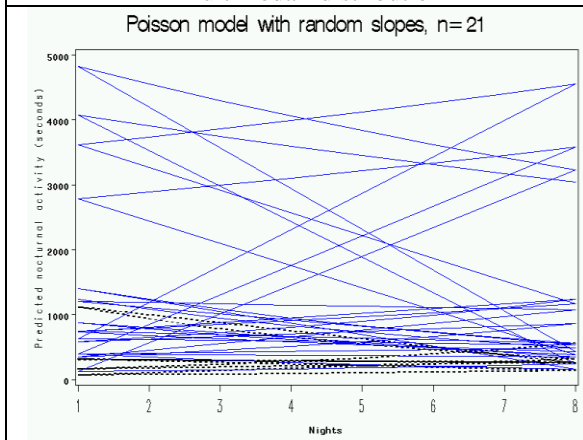
Linear empirical Bayes discrimination (*JMP*)



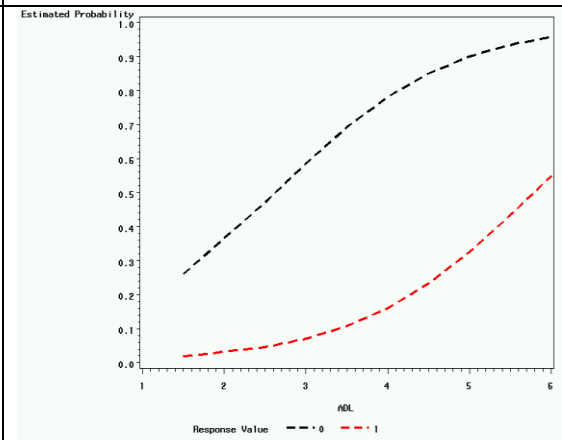
Correlation scatterplot between 8 repeated measurements; with diagonals showing right skewed 'multimodal' distribution



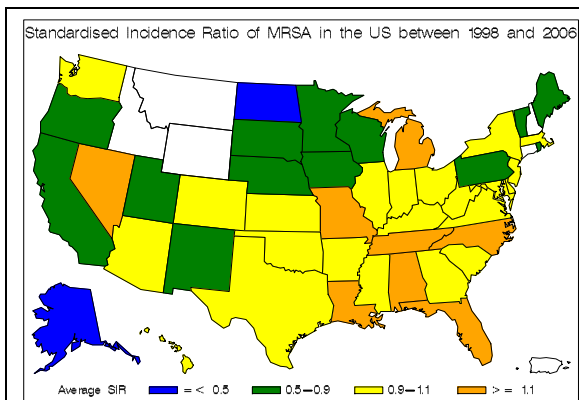
Spline-smoothed predicted response surface with squared residuals (screenshot during 360° rotation)



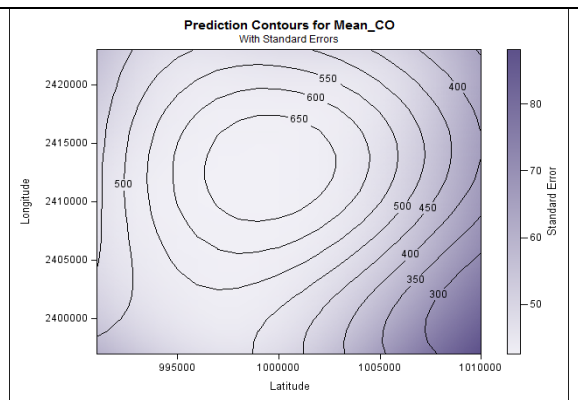
Random slopes by group: Poisson model (*proc nlmixed*)



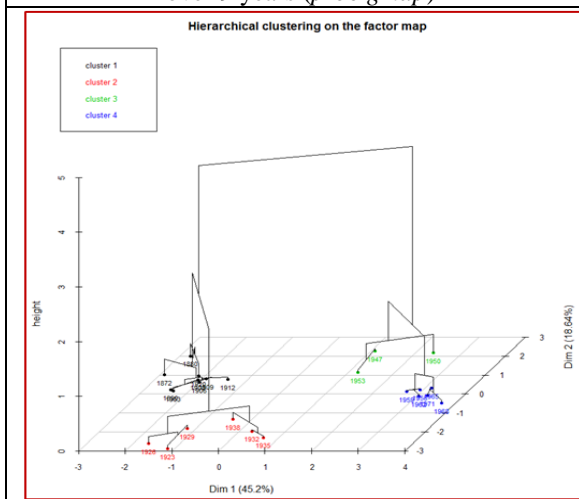
P-O model comparing 3 categories: 'worsening' (red), 'stable' (black) & 'improving' (reference) → subjects have a constant impact (OR) of ADL (exposure) across any level



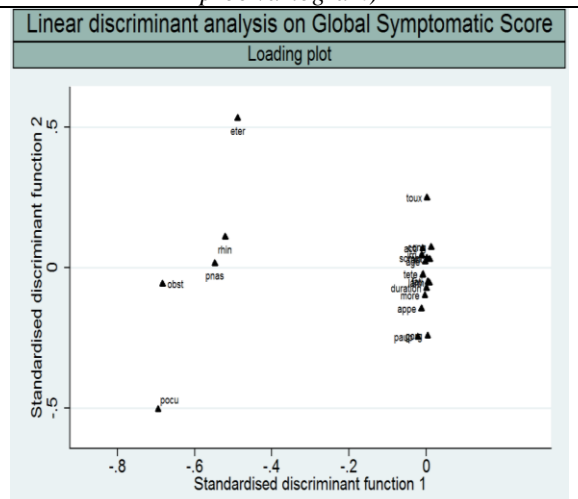
Crude SIRs standardised by age-classes, averaged
over 9 years (*proc gmap*)



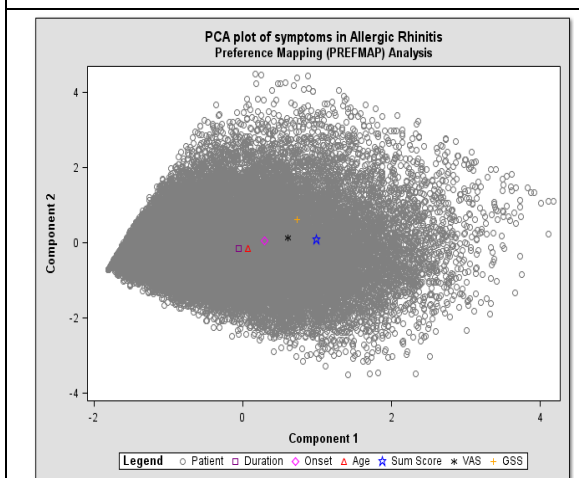
Kriging of air pollution (CO) data (*proc krige2d*,
proc variogram)



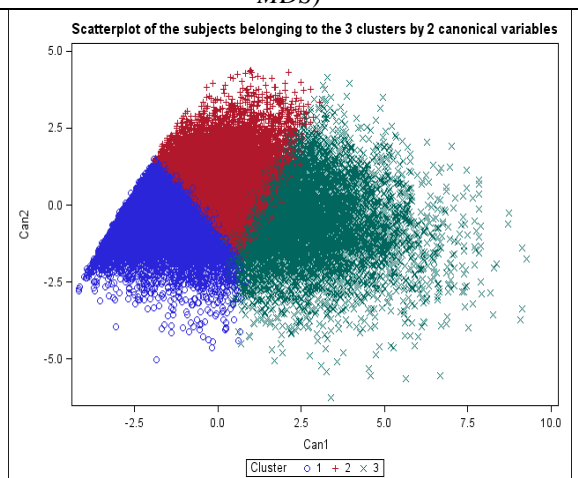
AHC clustering dendrogram combined with PCA
(package *FactoMineR*)



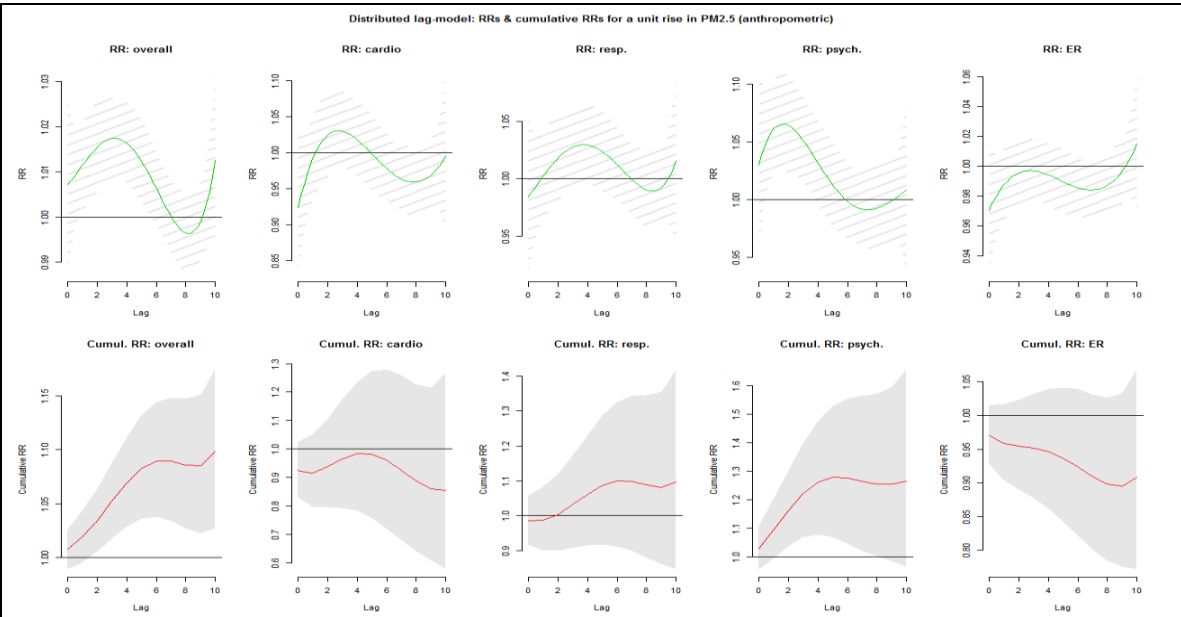
Loading plot of symptoms (*Stata*); in this case better than VAS or summary score; MDS not shown (*proc MDS*)



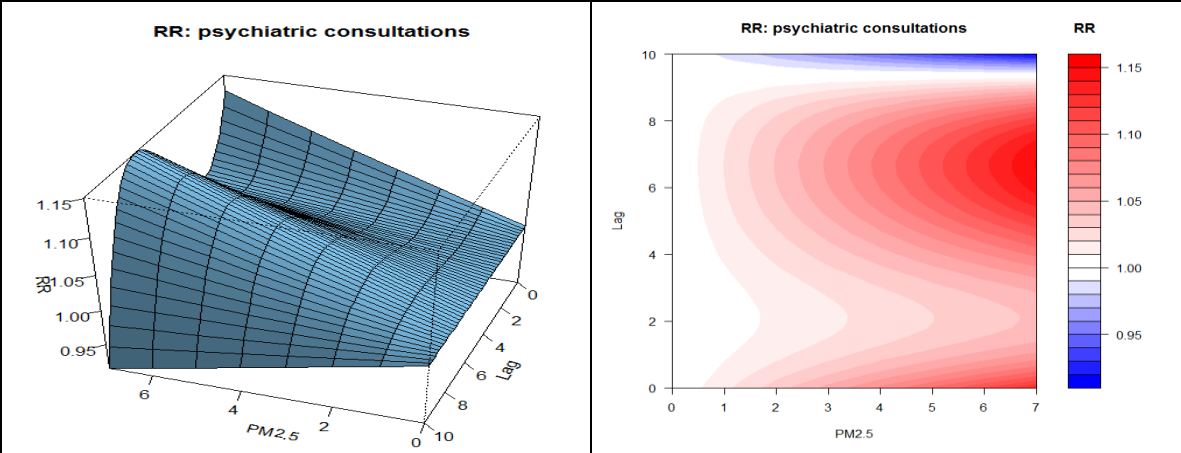
Preference mapping analysis (*proc prinqual*, *proc transreg*)



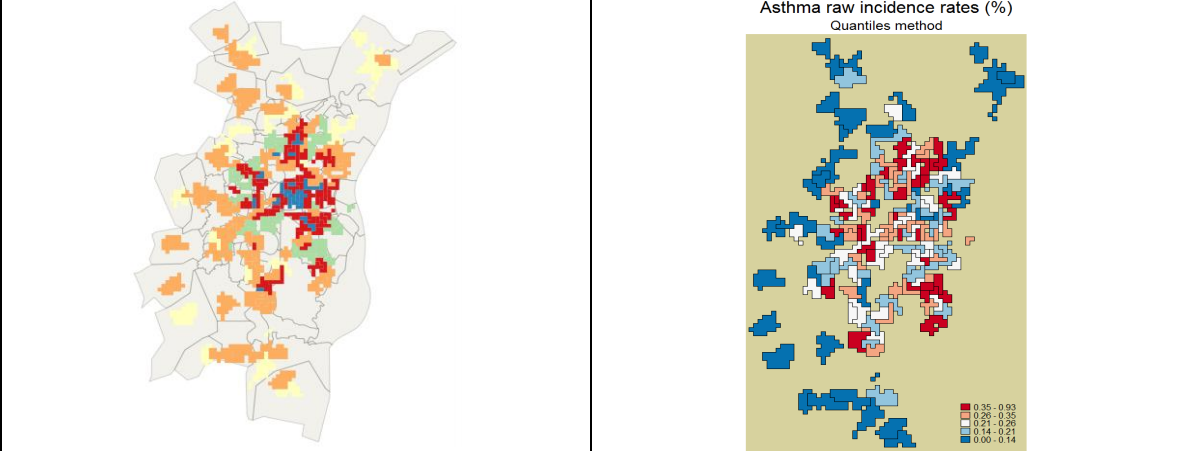
k-means cluster analysis (*proc fastclus*); in this case better than hierarchical cluster analysis (*proc cluster*, *proc tree*) not shown



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

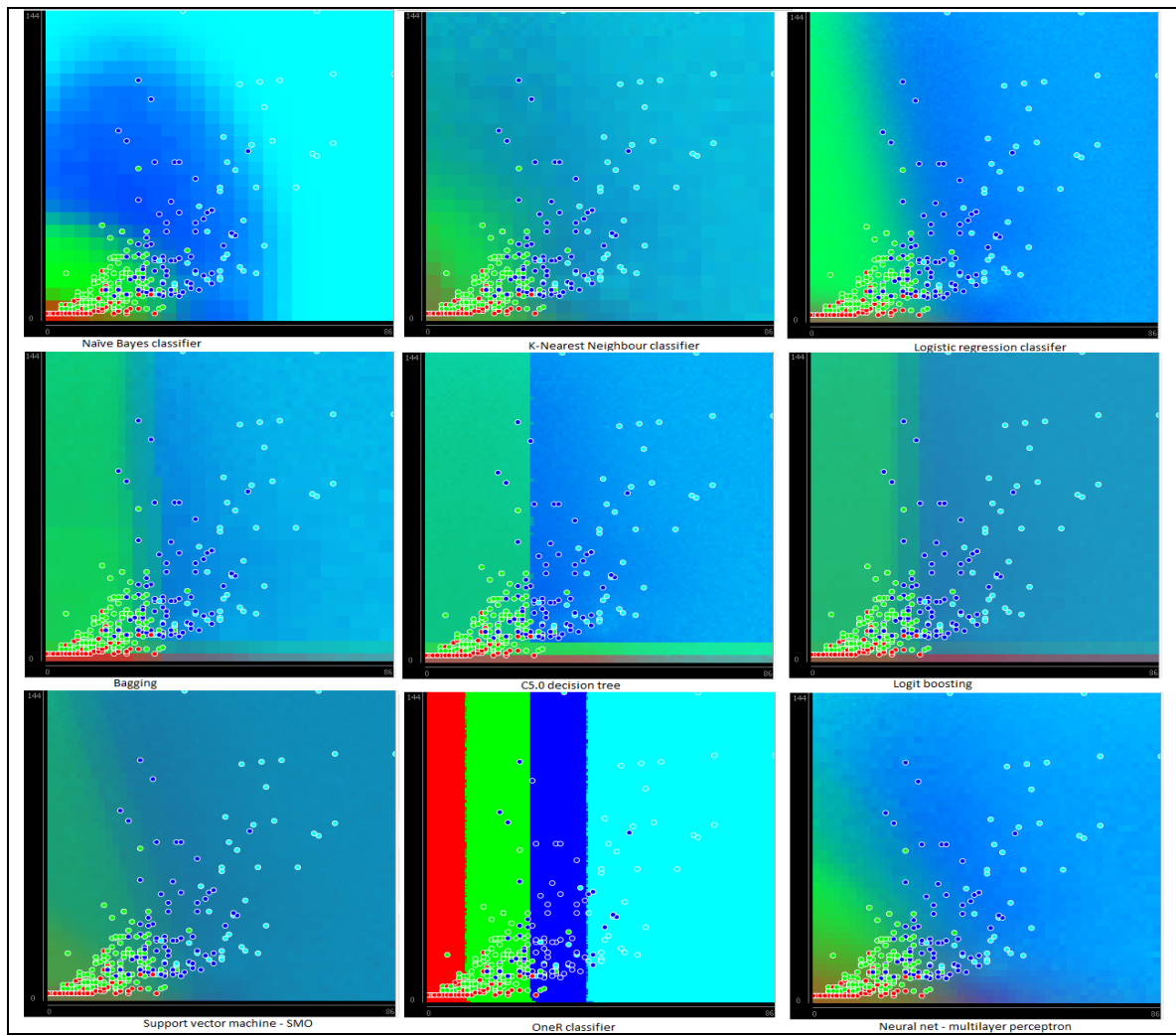


TSA with GAMs: DLM (package *dlm*)



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)

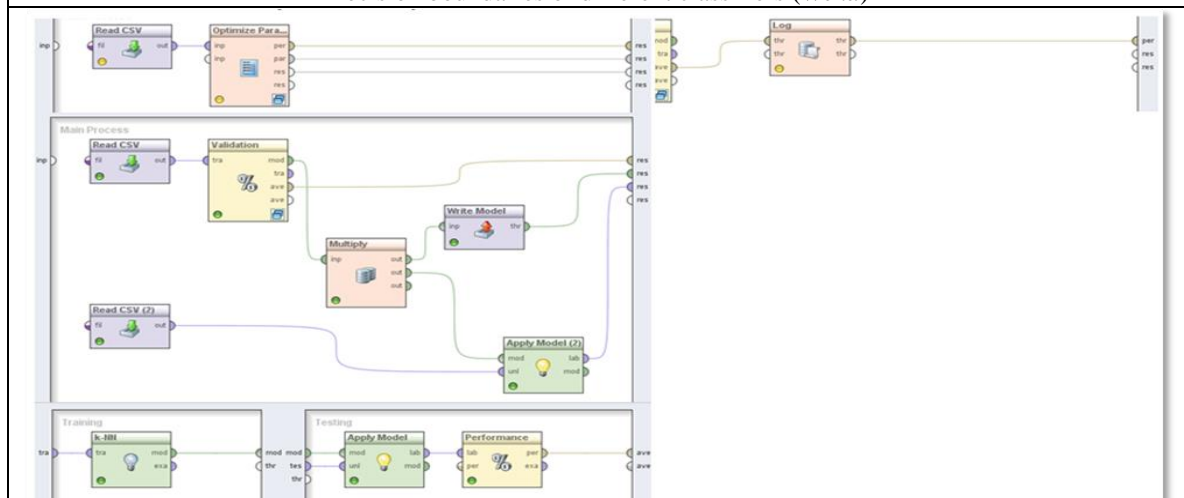
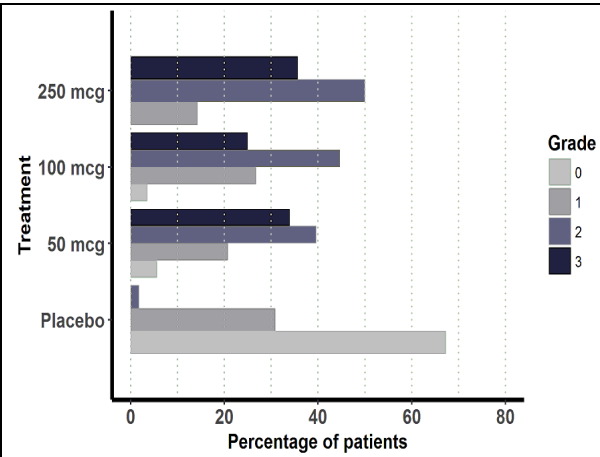
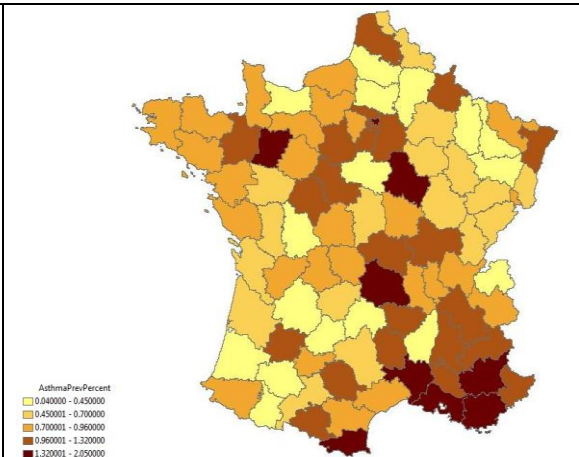


Figure 1. A flowchart on grid search parameter optimisation (top 2) followed by k -fold crossvalidation (bottom 2) (here, k -NN) using RapidMiner.

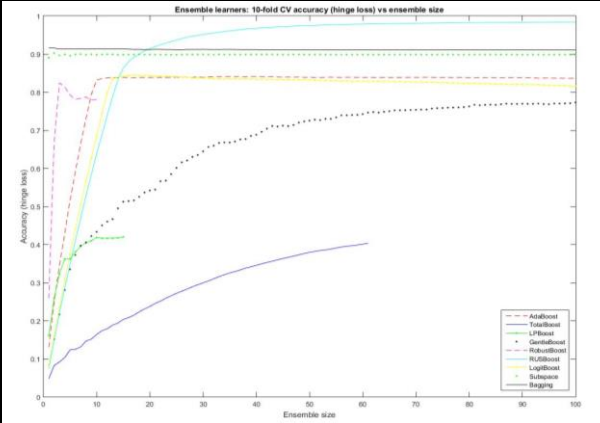
Parameter optimisation & predictive modelling flowchart (RapidMiner)



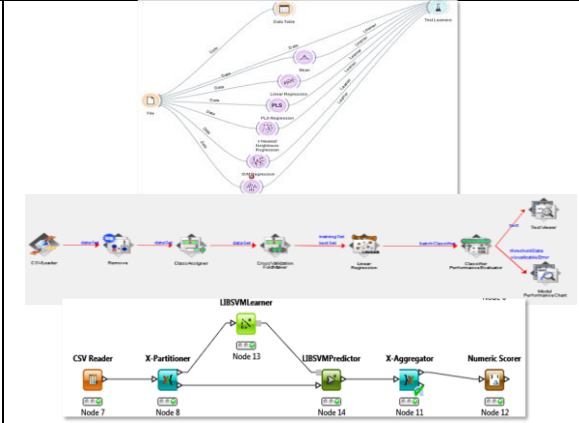
Barchart of % by treatment, grade (package *ggplot2*)



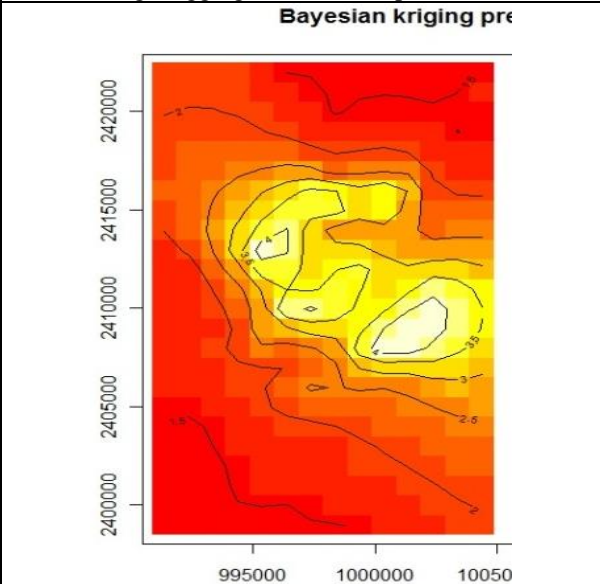
Prevalence % in France (*ArcGIS*) from the EGB cohort, map courtesy: NUTS3



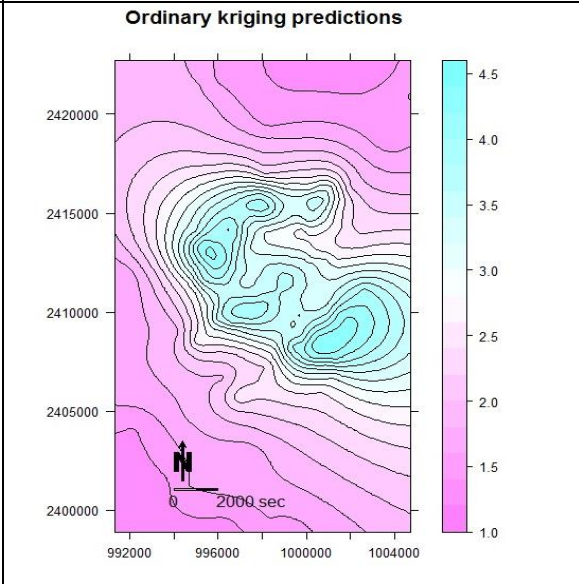
Different ensemble learning methods compared (boosting, bagging, random subspace) (*Matlab*)



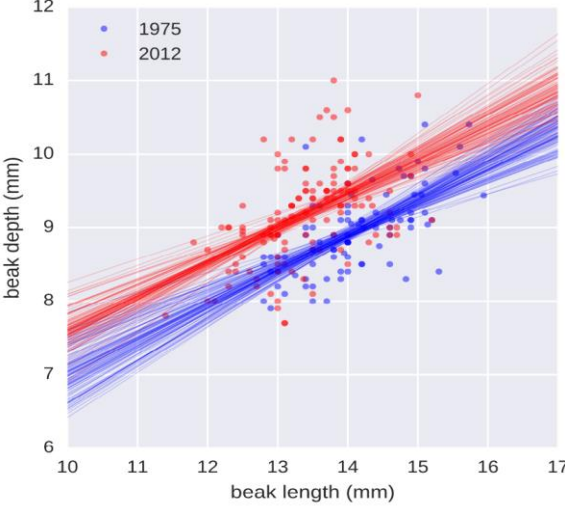
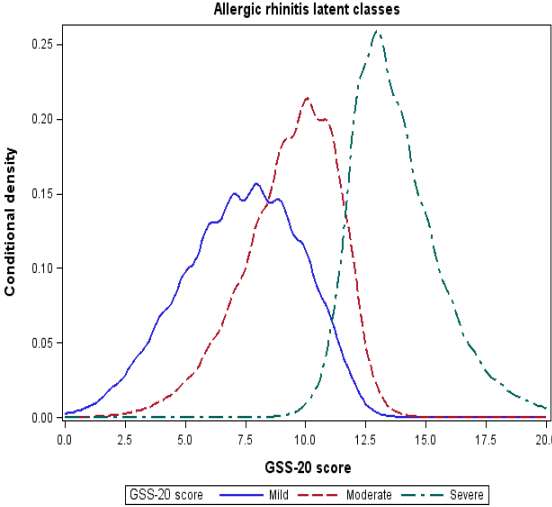
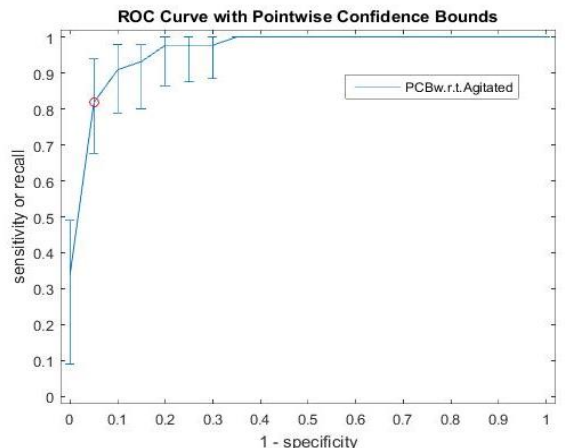
Predictive modelling process flow (*Orange miner*, *Weka*, *Knime*)



Bayesian Kriging of SES data (package *sgeostat*)



Kriging of SES data (package *gstat*)

 <p>Scatter plot showing beak depth (mm) on the y-axis (ranging from 6 to 12) versus beak length (mm) on the x-axis (ranging from 10 to 17). Data points are colored by year: 1975 (blue) and 2012 (red). Multiple regression lines are overlaid for each group, showing a positive correlation between beak length and beak depth.</p>	 <p>Latent class analysis plot titled "Allergic rhinitis latent classes". The y-axis is "Conditional density" (0.00 to 0.25) and the x-axis is "GSS-20 score" (0.0 to 20.0). Three curves represent latent classes: Mild (solid blue line), Moderate (dashed red line), and Severe (dashed green line). The Mild class peaks around a score of 7.5, the Moderate class around 10.0, and the Severe class around 12.5.</p>
Bootstrapped linear regression overlaying the scatter plot, by group (<i>Python</i>)	Latent class analysis (<i>proc lca</i>)
 <p>ROC Curve with Pointwise Confidence Bounds. The y-axis is "sensitivity or recall" (0 to 1) and the x-axis is "1 - specificity" (0 to 1). The curve is labeled "PCBw.r.t.Agitated". The curve shows high sensitivity (above 0.8) for low 1 - specificity (below 0.2), indicating good diagnostic performance.</p>	
ROC curve with bootstrapped 95% CI & optimal operating point (<i>Matlab</i>)	