Exercise Bland Altman

1. Fit a model with fixed effect method*id and with two different variance-covariance models: different variances for each method, and equal variance for methods. Test for equal variances. Try proc glimmix with option covtest to test for variance homogeneity.

2. In the following models ID is not treated as a fixed effect, but the influence of ID is modelled through the covariance. The only fixed effect in the models is thus method. For each model take out the 4x4 covariance matrix for a subject.

3. Fit an unstructured covariance matrix V

4. Fit a covariance structure with 5 parameters, $v_{11}=v_{22}$, v_{12}, $v_{33}=v_{44}$, v_{34}, $v_{13}=v_{14}=v_{23}=v_{14}$. Compare this model to the unstructured covariance model.

5. Compare the estimated variance parameters in 3 and 5. How are the estimates in 4 obtained?