Zusammenfassung der Master-Thesis von
Maya Züllig

Resistance Testing in Treatment-Experienced HIV-Infected Patients: Systematic Review and Meta-Analysis

Objective: To estimate the impact of HIV resistance assessments based on genotypic antiretroviral resistance testing (GART), and phenotypic antiretroviral resistance testing (PART) on clinical, virologic and immunological outcomes.

Data Sources: PUBMED (1966 to March 2005), EMBASE (1980 to April 2005), Cochrane Library (Issue 1/2005). Current Controlled Trials, Science Citation Index (both March 2005). Reference lists of obtained papers. Contact with trial authors.

Review methods: All published and unpublished RCTs comparing genotype and/ or phenotype guided HIV treatment versus standard care were included. Method of randomisation, concealment of allocation, blinding, adequacy of analyses, publication status, source of funding and involvement of funding body were assessed. The main metric for binary outcomes was the odds ratio. For continuous outcomes standardised mean differences (SMD) were calculated. Pooled results are based on random effects models.

Results: Ten trials were included (2386 patients). Compared with controls, GART increased the proportion of patients achieving suppression of viral load below detection (odds ratio 1.51; 95% CI 1.17 – 1.93), and improved the mean decrease in the viral load by 1.36 SMD (0.38 – 2.34). Surprisingly, the increase of CD4 cell count was somewhat more pronounced without GART (SMD -0.36; -0.61 – -0.10). There was little evidence supporting clinical efficacy (prevention of AIDS or death). For PART, there was no clear support for virologic or immunological benefit, but there was some evidence from one trial that PART might reduce serious adverse events.

Conclusion: The available evidence is restricted to virologic benefits of GART-based approaches in treatment-experienced patients and casts some doubt on the current HIV resistance testing recommendations.