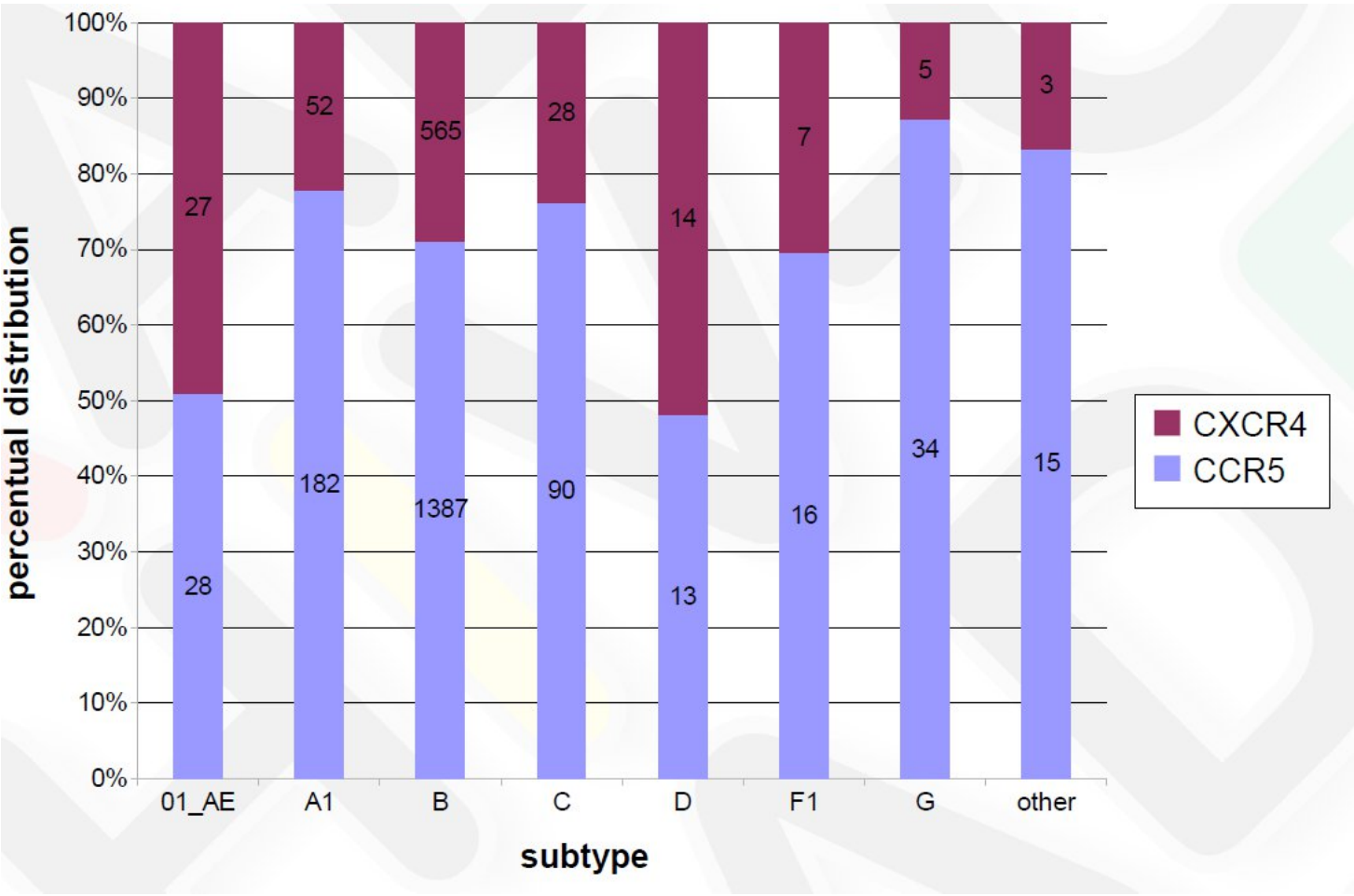
eP838

Abstract (eposter session)

Genotypic HIV-coreceptor tropism testing with geno2pheno[coreceptor]: differences in prediction depending on HIV-1 subtype

M. Obermeier*, H. Walter, K. Korn, M. Däumer, E. Wolf, M. Stürmer, R. Ehret, C. Noah, P. Braun, C. Kücherer, H. Müller, J. Eberle, R. Kaiser, A. Thielen, T. Berg (Berlin, Erlangen, Kaiserslautern, Munich, Frankfurt, Hamburg, Aachen, Cologne, DE)

Background: Determination of HIV-1 coreceptor tropism and detection of CCR5-tropic virus is a major prerequisite before starting treatment with a CCR5-blocker like Maraviroc. While most of the patients currently under treatment with Maraviroc are probably infected with HIV-1 subtype B viruses, recently published data show differences in the distribution of coreceptor tropism in different HIV-1 subtypes. Material and Methods: In a Germany-wide project within the HIV-GRADE society, V3-loop sequences of 2466 patients were analysed with geno2pheno[coreceptor] for coreceptor tropism using a FPR cut-off of 10%. HIV-1 subtype was determined by using the COMET HIV subtyping tool. The ratio of CCR5 vs CXCR4 tropic virus was calculated for each subtype. On the observed distribution in each subtype statistical analysis was performed using the chi2 test. Results: Most of the samples were classified by the COMET subtyping tool as belonging to HIV-1 subtype B (79%, n=1952). Other subtypes present in at least 23 samples were A1 (9.5%, n=234), C (4.8%, n=118), CRF01_AE(2,2%, n=55), G(1,6%, n=39), D(1,1%, n=27), F(0.9%, n=23). The calculated normalized mean distribution over all subtypes was 71% CCR5-tropic virus vs. 29% CXCR4-tropic virus.. A higher rate of CXCR4 tropic virus could be detected in HIV-1 subtypes D (52% CXCR4, 48% CCR5, p=0.01) and CRF01_AE (49% CXCR4, 51% CCR5, p=0.001), while in HIV-1 subtypes A1 (22% CXCR4, 78% CCR5, p=0.02) and G (13% CXCR4, 87% CCR5, p=0.02), a higher rate of CCR5-tropic virus was observed. Conclusions: Our analysis shows a different distribution of CCR5 and CXCR4 tropic virus in some of the analysed subtypes. Without further data on treatment success of patients with non-B subtypes under treatment with Maraviroc, it remains unclear if subtypespecific differences in the distribution of tropism are biased by differences in clinical variables before test or if there is a bias in the tropism interpretation system. In the latter case, individual interpretation cut-offs for different subtypes may be necessary.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