Mean gene-wide dN/dS estimates

 Are not the way to go, <u>except</u> when you have very small (2-3 sequence) datasets

For example:

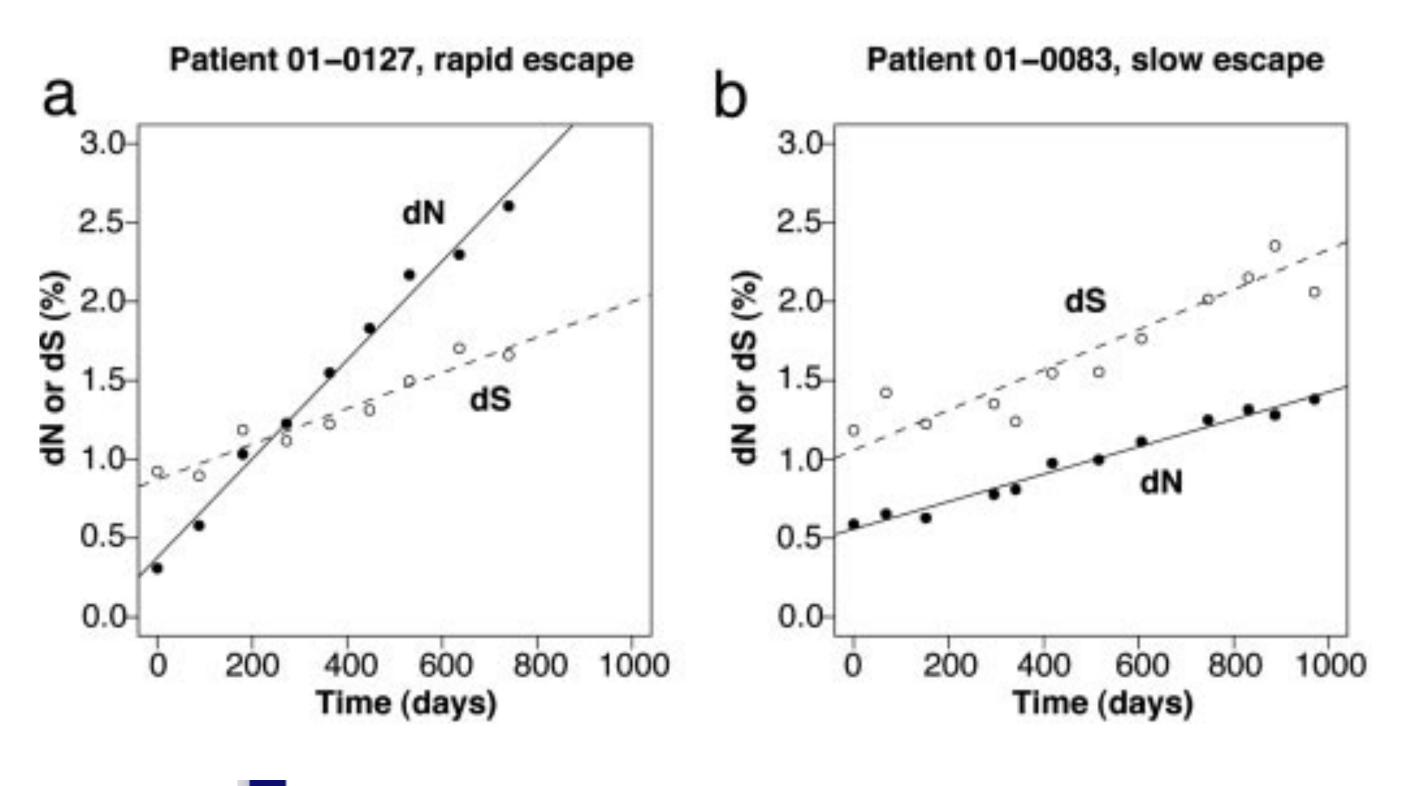
- The humoral arm of the immune system mounts a potent defense against viral infections
- Existing successful vaccines are based on raising a neutralizing antibody (nAb) response to the pathogen
- No simple host genetic basis (epitopes) of the specificity of neutralizing antibody responses is known
- Need to measure these responses

An example of mean dN/dS utility

a 12-C regions V regions gp120 10 8 Sp/Np 6 Rate of escape

Slow (S) and Rapid (R)

The extent of immune selection pressure drives intra-host evolution in HIV-1



Neutralizing antibody responses drive the evolution of human immunodeficiency virus type 1 envelope during recent HIV infection

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