

**Table S2. Application of Akaike Information Criterion to independent drug action.**

**Related to Figure 4.**

The Akaike Information Criterion was applied to compare the quality of the independent drug action model with three different classes of synergy models, of variable complexity, in each of five human clinical trials that lack evidence of additive or synergistic effects (see Methods). Full source code and data for these calculations are available in supplemental code ('Figure 4, clinical trials analysis.nb').

<b>Model</b>	<b>Parameters (k)</b>	<b>log (L) (L = likelihood function)</b>	<b>Akaike Information Criterion AIC = 2.k - 2.log(L)</b>	<b>Relative Likelihood of model Exp[(AIC<sub>min</sub>-AIC<sub>i</sub>)/2]</b>
Independent Drug Action	1 ( <i>not fitted</i> )	- 4.8	11.7	1
Synergy, 1 parameter for extension of response duration (horizontal scaling of PFS curve)	1 per drug combination = 5	-9.7	29.5	≈ 1 / 7,000
Synergy, 1 parameter for decrease in probability of progression (vertical scaling of PFS curve)	1 per drug combination = 5	-11.5	33.0	≈ 1 / 40,000
Synergy, with 2 parameters (both horizontal and vertical scaling of PFS curve)	2 per drug combination = 10	-6.3	32.6	≈ 1 / 35,000