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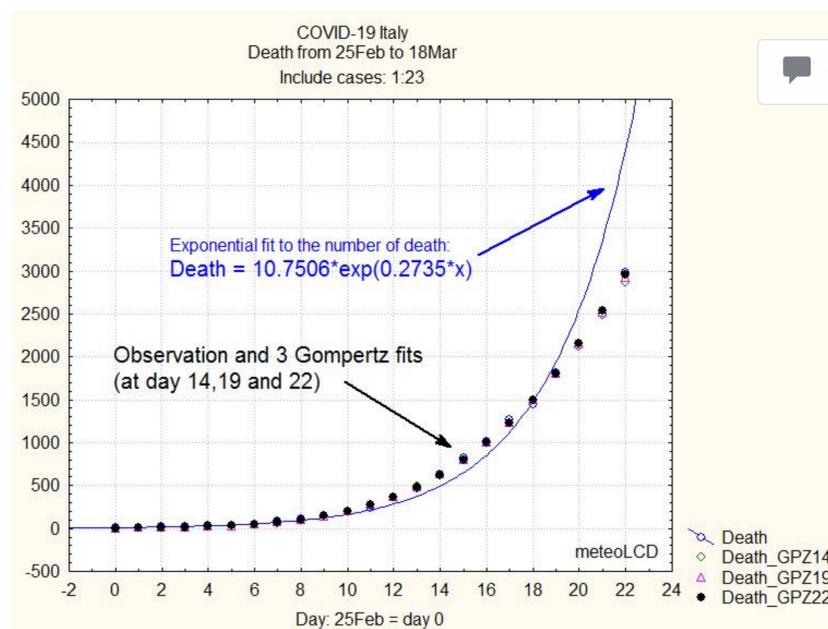
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COVID-19: does the number of deaths increase exponentially? (2/x)

In this 2nd and very short comment on the COVID-19 situation in **Italy** (data for 22 days now [available](#)) I will show that the usual remark on the exponential development of the death cases is not correct. The next figure shows as points the number of observed deaths (black dots) up to 18-Mar-20, and also what 3 different fits to the Gompertz function give when made at days 14, 19 and 22 (the points given by Death_GPZxy)):



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Firstly, the 3 GPZ fits numbers are nearly identical to the observations (the 4 markers mostly coincide). The blue curve is an exponential fit for the complete series of 22 days: clearly from day 19 on the real numbers lie **below** the exponential curve. This difference will probably increase in the future.

Conclusion:

In the ongoing COVID-19 in Italy, **the number of deaths does not increase exponentially**, but follows very closely the Gompertz function $y = a \cdot \exp(-b \cdot \exp(-c \cdot x))$, and so will be gradually **lower** to what an exponential increase would suggest.

(to be continued)

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