

ONLINE DATA SUPPLEMENT

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Case-fatality of COPD exacerbations: a meta-analysis and statistical modeling approach

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The survival function during the stable period for each study was parameterized using three parameters:

$$S(t) = (1-g) \text{Exp}[-\alpha t - \beta t^2]$$

with t time, with $x=0$ being time of onset of exacerbation

$S(t)$ survival probability

α, β parameters that define the non-linear change over time

g case-fatality of an exacerbation

Table 1: Median parameter values (95% uncertainty interval) of the survival function

1 st author of the study, year of publication	α	β	g
Connors, 1996 (1)	0.482 (0.353-0.608)	-0.117 (-0.164 - -0.071)	0.174 (0.115-0.231)
Vestbo, 1998 (2)	0.132 (0.055-0.204)	0.001 (-0.013-0.018)	0.126 (0.058-0.184)
Groenewegen, 2003 (3)	-0.006 (-0.087-0.069)	0.016 (0-0.033)	0.179 (0.102-0.258)
Gunen, 2005 (4)	0.135 (0.058-0.228)	-0.014 (-0.03-0.002)	0.17 (0.079-0.254)
McGhan, 2007 (5)	0.229 (0.22-0.238)	-0.01 (-0.012- - 0.008)	0.114 (0.106-0.122)
Brekke, 2008(6)#	0.191 (0.187-0.195)	-0.017 (-0.018- -0.016)	0.190 (0.187-0.193)

Based on patient-level data

References:

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- (2) Vestbo J, Prescott E, Lange P, Schnohr P, Jensen G. Vital prognosis after hospitalization for COPD: a study of a random population sample. *Respir Med* 1998;92:772-6.
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- (5) McGhan R, Radcliff T, Fish R, Sutherland ER, Welsh C, Make B. Predictors of rehospitalization and death after a severe exacerbation of COPD. *Chest* 2007;132:1748-55.
- (6) Brekke PH, Omland T, Holmedal SH, Smith P, Soyseth V. Troponin T elevation and long-term mortality after chronic obstructive pulmonary disease exacerbation. *Eur Respir J* 2008;31:563-70.