

# External Validation of a Breath-Based Prediction Model for Malignant Pleural Mesothelioma

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**Table S1.** Model specifications of the original and updated prediction models.

	Original model	Updated model
<b>Intercept</b>	0.2863634	-0.01539101
<b>P1</b>	-9.3875710	.
<b>P7</b>	-3.9149386	.
<b>P9</b>	30.9184867	-20.26094596
<b>P15</b>	-14.4468673	.
<b>P21</b>	-10.1389553	.
<b>P26</b>	-30.1241610	.
<b>P84</b>	91.8151273	.
<b>P88</b>	-19.0494276	34.43419887
<b>P101</b>	47.9473706	99.13002708
<b>P122</b>	8.2431091	33.61673132
<b>P236</b>	0.8623499	.

Model intercept and regression coefficients of the selected features are displayed.

**Table S2.** Kendall's  $\tau$  rank correlation between the age of the pleural mesothelioma patients and the volatile organic compounds (VOCs) of the original model.

VOCs	Age	
	Kendall's $\tau$	p-value
<b>P1</b>	0.053	0.435
<b>P7</b>	- 0.045	0.506
<b>P9</b>	- 0.051	0.453
<b>P15</b>	0.172	0.012*
<b>P21</b>	0.112	0.102
<b>P26</b>	0.040	0.560
<b>P84</b>	- 0.060	0.385
<b>P88</b>	0	1
<b>P101</b>	0.049	0.479
<b>P122</b>	- 0.026	0.710
<b>P236</b>	- 0.094	0.168

\*p < 0.05.

**Table S3.** Comparison of the peak intensities of the analysed volatile organic compounds between breath samples taken with ( $n = 3$ ) and without ( $n = 3$ ) additional viral filter (paired Wilcoxon signed rank test).

Peak	Peak intensity		p-value
	With viral filter	Without viral filter	
<b>P1</b>	0.0483 (0.0476-0.0500)	0.0543 (0.0513-0.0563)	0.438
<b>P7</b>	0.0250 (0.0249-0.0250)	0.0219 (0.0195-0.0235)	0.400
<b>P9</b>	0.0095 (0.0088-0.0103)	0.0107 (0.0104-0.0109)	0.438

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<b>P15</b>	0.0125 (0.0122-0.0127)	0.0142 (0.0127-0.0144)	0.438
<b>P21</b>	0.0047 (0.0045-0.0051)	0.0054 (0.0052-0.0060)	0.438
<b>P26</b>	0.2085 (0.1940-0.2250)	0.1363 (0.1160-0.2010)	0.438
<b>P84</b>	0.0004 (0.0002-0.0005)	0.0000 (0.0000-0.0003)	0.201
<b>P88</b>	0.0092 (0.0092-0.0097)	0.0096 (0.0090-0.0100)	0.400
<b>P101</b>	0.0020 (0.0019-0.0021)	0.0011 (0.0010-0.0012)	0.438
<b>P122</b>	0.0131 (0.0119-0.0135)	0.0135 (0.0116-0.0138)	0.438
<b>P236</b>	0.0264 (0.0246-0.0300)	0.0180 (0.0174-0.0254)	0.438

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Values presented as median (Q1-Q3).