
Supplementary — An estimator for the hypervolume under the ROC manifold

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1. Computational time

In Table 1, 2 and 3, for each simulation, the computational times, in seconds, used for obtaining the results presented in the manuscript, are reported.

		HUM_{LN}	HUM_{EX}	HUM_{LF}
<i>case 1</i>	$n_1=n_2=n_3=n_4=30$	2.93	78.510	506.79
	$n_1=n_2=n_3=n_4=50$	3.09	339.220	3052.530
	$n_1=n_2=n_3=n_4=80$	3.55	1430.370	19739.520
<i>case 2</i>	$n_1=n_2=n_3=n_4=30$	3.04	76.69	502.89
	$n_1=n_2=n_3=n_4=50$	3.22	347.85	2782.18
	$n_1=n_2=n_3=n_4=80$	3.64	1458.08	20393.03
<i>case 3</i>	$n_1=n_2=n_3=n_4=30$	3.08	76.42	479.56
	$n_1=n_2=n_3=n_4=50$	3.20	342.68	2751.72
	$n_1=n_2=n_3=n_4=80$	3.69	1445.08	20036.58

Table 1: Computational time in seconds for the Weibull case under the Lehmann assumption and three different vectors of parameters β of the Cox proportional hazards regression model.

		HUM_{LN}	HUM_{EX}	HUM_{LF}
<i>case 4</i>	$n_1=n_2=n_3=n_4=30$	2.95	77.39	508.87
	$n_1=n_2=n_3=n_4=50$	3.14	346.70	2802.82
	$n_1=n_2=n_3=n_4=80$	3.59	1471.26	20311.33
<i>case 5</i>	$n_1=n_2=n_3=n_4=30$	3.01	76.66	515.41
	$n_1=n_2=n_3=n_4=50$	3.20	344.50	2813.94
	$n_1=n_2=n_3=n_4=80$	3.61	1448.56	20181.73
<i>case 6</i>	$n_1=n_2=n_3=n_4=30$	3.01	76.39	498.56
	$n_1=n_2=n_3=n_4=50$	3.16	343.69	2800.65
	$n_1=n_2=n_3=n_4=80$	3.61	1453.50	20238.43

Table 2: Computational time for the Weibull case with group-specific shape parameters (Lehmann condition not satisfied) and three different vectors of parameters β of the Monte Carlo inversion method.

		HUM_{LN}	HUM_{EX}	HUM_{LF}
<i>case 7</i>	$n_1=n_2=n_3=n_4=30$	2.92	77.55	493.97
	$n_1=n_2=n_3=n_4=50$	3.15	348.39	2814.59
	$n_1=n_2=n_3=n_4=80$	3.57	1469.82	20528.60
<i>case 8</i>	$n_1=n_2=n_3=n_4=30$	2.95	77.39	506.53
	$n_1=n_2=n_3=n_4=50$	3.14	346.70	2792.03
	$n_1=n_2=n_3=n_4=80$	3.59	1471.26	19866.11
<i>case 9</i>	$n_1=n_2=n_3=n_4=30$	2.86	76.33	504.18
	$n_1=n_2=n_3=n_4=50$	3.12	346.87	2795.04
	$n_1=n_2=n_3=n_4=80$	3.54	1450.50	20416.80

Table 3: Computational time for the case with group-specific expected values and equivalent variances.