Appendix D

Tables of Simulation Results

The following three sections contain the tables with the results of the simulation study described and evaluated in Chapter 7. First, Section D.1 contains the estimation results of each of the three parameters of model (7.1) for the three estimation methods employed. Second, in Section D.2 the estimation of the relative risk/odds ratio and conditional median for the Weibull and log logistic regression models, respectively, are summarized. Finally, the tables corresponding to the estimation of the covariate's distribution function are presented in Section D.3.

D.1 Single parameter estimation

This section contains a total of eight tables defined by the distribution of the response variable, the covariate, and the two parameter vector combinations.

D.1.1 Weibull regression models with normally distributed covariate

Table D.1a: Parameter estimation in Weibull model with normally distributed covariate, $\mu = 3$, $\beta = 0.45$ and $\sigma = 0.65$

	Midpoint Imputation			**Conditional Mean Imputation**			**Simultaneous Maximization**		
	Mean	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
					$n = 50$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\mu}$	3.272	0.272	6.561	2.675	−0.325	14.273	2.449	−0.551	16.432
$\hat{\beta}$	0.465	0.015	0.431	0.618	0.168	0.961	0.674	0.224	1.108
$\hat{\sigma}$	0.696	0.046	0.016	0.696	0.046	0.016	0.687	0.037	0.015
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\mu}$	4.808	1.808	5.305	3.726	0.726	40.685	3.613	0.613	42.563
$\hat{\beta}$	0.078	−0.372	0.294	0.356	−0.094	2.745	0.384	−0.066	2.866
$\hat{\sigma}$	0.699	0.049	0.017	0.698	0.048	0.017	0.613	−0.037	0.022
					$n = 150$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\mu}$	3.543	0.543	2.221	3.075	0.075	3.439	2.979	−0.021	3.746
$\hat{\beta}$	0.394	−0.056	0.131	0.514	0.064	0.232	0.537	0.087	0.255
$\hat{\sigma}$	0.703	0.053	0.007	0.703	0.053	0.007	0.7	0.05	0.007
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\mu}$	4.799	1.799	3.771	3.655	0.655	6.093	3.55	0.55	5.586
$\hat{\beta}$	0.079	−0.371	0.178	0.375	−0.075	0.395	0.402	−0.048	0.366
$\hat{\sigma}$	0.711	0.061	0.008	0.71	0.06	0.008	0.681	0.031	0.007
					$n = 300$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\mu}$	3.467	0.467	1.14	2.993	−0.007	1.623	2.919	−0.081	1.738
$\hat{\beta}$	0.416	−0.034	0.062	0.537	0.087	0.114	0.554	0.104	0.124
$\hat{\sigma}$	0.702	0.052	0.005	0.702	0.052	0.005	0.699	0.049	0.005
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\mu}$	4.786	1.786	3.426	3.623	0.623	2.552	3.593	0.593	2.595
$\hat{\beta}$	0.083	−0.367	0.152	0.384	−0.066	0.153	0.393	−0.057	0.157
$\hat{\sigma}$	0.71	0.06	0.006	0.708	0.058	0.006	0.691	0.041	0.005

Table D.1b: Parameter estimation in Weibull model with normally distributed covariate, $\mu = 4$, $\beta = 0.25$ and $\sigma = 0.45$

	Midpoint Imputation			**Conditional Mean Imputation**			**Simultaneous Maximization**		
	Mean	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
					$n = 50$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.452	0.452	3.139	4.111	0.111	6.197	3.992	−0.008	7.84
$\hat{\boldsymbol{\beta}}$	0.192	−0.058	0.197	0.279	0.029	0.408	0.309	0.059	0.517
$\hat{\boldsymbol{\sigma}}$	0.479	0.029	0.007	0.479	0.029	0.007	0.474	0.024	0.007
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	5.04	1.04	2.017	4.206	0.206	19.579	4.3	0.3	15.677
$\hat{\boldsymbol{\beta}}$	0.044	−0.206	0.114	0.259	0.009	1.341	0.234	−0.016	1.068
$\hat{\boldsymbol{\sigma}}$	0.481	0.031	0.007	0.481	0.031	0.007	0.427	−0.023	0.01
					$n = 150$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.236	0.236	1.056	3.94	−0.06	1.864	3.885	−0.115	2.087
$\hat{\boldsymbol{\beta}}$	0.247	−0.003	0.066	0.323	0.073	0.128	0.336	0.086	0.143
$\hat{\boldsymbol{\sigma}}$	0.487	0.037	0.003	0.487	0.037	0.003	0.485	0.035	0.003
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	5.007	1.007	1.272	4.22	0.22	2.673	4.058	0.058	2.717
$\hat{\boldsymbol{\beta}}$	0.052	−0.198	0.059	0.256	0.006	0.181	0.299	0.049	0.189
$\hat{\boldsymbol{\sigma}}$	0.487	0.037	0.004	0.486	0.036	0.004	0.466	0.017	0.003
					$n = 300$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.258	0.258	0.537	3.977	−0.023	0.854	3.941	−0.059	0.909
$\hat{\boldsymbol{\beta}}$	0.242	−0.008	0.031	0.314	0.064	0.06	0.322	0.073	0.065
$\hat{\boldsymbol{\sigma}}$	0.484	0.034	0.002	0.484	0.034	0.002	0.483	0.033	0.002
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	5.05	1.05	1.218	4.48	0.48	1.199	4.395	0.395	1.318
$\hat{\boldsymbol{\beta}}$	0.043	−0.207	0.051	0.19	−0.06	0.07	0.213	−0.037	0.081
$\hat{\boldsymbol{\sigma}}$	0.487	0.037	0.002	0.487	0.037	0.002	0.477	0.027	0.002

D.1.2 Weibull regression models with Weibull-distributed covariate

Table D.2a: Parameter estimation in Weibull model with Weibull-distributed covariate, $\mu = 3$, $\beta = 0.45$ and $\sigma = 0.65$

	Midpoint Imputation			**Conditional Mean Imputation**			**Simultaneous Maximization**		
	Mean	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
					$\boldsymbol{n = 50}$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	3.306	0.306	0.847	3.153	0.153	1.023	3.019	0.019	1.112
$\hat{\boldsymbol{\beta}}$	0.455	0.005	0.057	0.495	0.045	0.077	0.529	0.079	0.089
$\hat{\boldsymbol{\sigma}}$	0.686	0.036	0.015	0.69	0.04	0.015	0.675	0.025	0.015
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.113	1.113	2.102	4.234	1.234	2.968	4.033	1.033	2.801
$\hat{\boldsymbol{\beta}}$	0.253	−0.197	0.107	0.232	−0.218	0.179	0.288	−0.162	0.176
$\hat{\boldsymbol{\sigma}}$	0.737	0.087	0.024	0.744	0.094	0.026	0.674	0.024	0.031
					$\boldsymbol{n = 150}$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	3.273	0.273	0.286	3.106	0.106	0.279	3.055	0.055	0.281
$\hat{\boldsymbol{\beta}}$	0.464	0.014	0.016	0.508	0.058	0.023	0.521	0.071	0.026
$\hat{\boldsymbol{\sigma}}$	0.694	0.044	0.006	0.697	0.047	0.006	0.689	0.039	0.006
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.112	1.112	1.449	4.411	1.411	2.194	4.399	1.399	2.241
$\hat{\boldsymbol{\beta}}$	0.25	−0.2	0.057	0.178	−0.272	0.091	0.186	−0.264	0.095
$\hat{\boldsymbol{\sigma}}$	0.738	0.088	0.013	0.749	0.099	0.015	0.733	0.083	0.013
					$\boldsymbol{n = 300}$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	3.297	0.297	0.194	3.134	0.134	0.154	3.109	0.109	0.15
$\hat{\boldsymbol{\beta}}$	0.459	0.009	0.008	0.502	0.052	0.013	0.508	0.058	0.013
$\hat{\boldsymbol{\sigma}}$	0.706	0.056	0.005	0.708	0.058	0.006	0.702	0.052	0.005
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.156	1.156	1.457	4.489	1.489	2.321	4.513	1.513	2.423
$\hat{\boldsymbol{\beta}}$	0.237	−0.213	0.055	0.155	−0.295	0.096	0.152	−0.298	0.101
$\hat{\boldsymbol{\sigma}}$	0.748	0.098	0.012	0.758	0.108	0.014	0.751	0.101	0.013

Table D.2b: Parameter estimation in Weibull model with Weibull distributed covariate, $\mu = 4$, $\beta = 0.25$ and $\sigma = 0.45$

	Midpoint Imputation			**Conditional Mean Imputation**			**Simultaneous Maximization**		
	Mean	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
					$\boldsymbol{n = 50}$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.271	0.271	0.479	4.183	0.183	0.553	4.112	0.112	0.595
$\hat{\boldsymbol{\beta}}$	0.237	−0.013	0.03	0.26	0.01	0.038	0.278	0.028	0.043
$\hat{\boldsymbol{\sigma}}$	0.479	0.029	0.007	0.48	0.03	0.007	0.473	0.023	0.007
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.69	0.69	0.858	4.76	0.76	1.095	4.62	0.62	1.281
$\hat{\boldsymbol{\beta}}$	0.128	−0.122	0.044	0.115	−0.135	0.062	0.154	−0.096	0.086
$\hat{\boldsymbol{\sigma}}$	0.496	0.046	0.009	0.499	0.049	0.009	0.461	0.011	0.011
					$\boldsymbol{n = 150}$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.226	0.226	0.157	4.13	0.13	0.153	4.103	0.103	0.154
$\hat{\boldsymbol{\beta}}$	0.249	−0.001	0.008	0.275	0.025	0.011	0.281	0.031	0.012
$\hat{\boldsymbol{\sigma}}$	0.485	0.035	0.003	0.486	0.036	0.004	0.483	0.033	0.003
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.683	0.683	0.573	4.83	0.83	0.786	4.839	0.839	0.826
$\hat{\boldsymbol{\beta}}$	0.132	−0.118	0.022	0.097	−0.153	0.032	0.097	−0.153	0.034
$\hat{\boldsymbol{\sigma}}$	0.503	0.053	0.005	0.507	0.057	0.006	0.5	0.05	0.005
					$\boldsymbol{n = 300}$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.214	0.214	0.096	4.122	0.122	0.079	4.108	0.107	0.078
$\hat{\boldsymbol{\beta}}$	0.254	0.004	0.004	0.278	0.028	0.005	0.282	0.031	0.006
$\hat{\boldsymbol{\sigma}}$	0.484	0.034	0.002	0.485	0.035	0.002	0.482	0.032	0.002
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.69	0.69	0.531	4.868	0.868	0.798	4.898	0.898	0.854
$\hat{\boldsymbol{\beta}}$	0.129	−0.121	0.019	0.085	−0.165	0.031	0.079	−0.171	0.034
$\hat{\boldsymbol{\sigma}}$	0.505	0.055	0.004	0.51	0.06	0.005	0.507	0.057	0.004

D.1.3 Log logistic regression models with normally distributed covariate

Table D.3a: Parameter estimation in log logistic model with normally distributed covariate, $\mu = 3$, $\beta = 0.45$ and $\sigma = 0.65$

	Midpoint Imputation			**Conditional Mean Imputation**			**Simultaneous Maximization**		
	Mean	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
					$\boldsymbol{n = 50}$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	3.694	0.694	23.695	3.073	0.073	48.977	2.956	−0.044	59.672
$\hat{\boldsymbol{\beta}}$	0.411	−0.039	1.534	0.569	0.119	3.24	0.598	0.148	3.937
$\hat{\boldsymbol{\sigma}}$	0.831	0.181	0.055	0.832	0.182	0.055	0.821	0.171	0.052
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.992	1.992	10.133	3.425	0.425	102.312	3.664	0.664	123.167
$\hat{\boldsymbol{\beta}}$	0.08	−0.37	0.599	0.486	0.036	6.918	0.426	−0.024	8.385
$\hat{\boldsymbol{\sigma}}$	0.82	0.17	0.05	0.821	0.171	0.05	0.739	0.089	0.041
					$\boldsymbol{n = 150}$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	3.402	0.402	6.248	2.794	−0.206	11.298	2.67	−0.33	12.421
$\hat{\boldsymbol{\beta}}$	0.489	0.039	0.403	0.644	0.194	0.779	0.675	0.225	0.858
$\hat{\boldsymbol{\sigma}}$	0.841	0.191	0.043	0.841	0.191	0.044	0.839	0.189	0.043
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	5.0	2.0	5.388	3.798	0.798	15.298	3.776	0.776	17.755
$\hat{\boldsymbol{\beta}}$	0.08	−0.37	0.241	0.391	−0.059	1.007	0.396	−0.054	1.189
$\hat{\boldsymbol{\sigma}}$	0.84	0.19	0.043	0.839	0.189	0.043	0.818	0.168	0.036
					$\boldsymbol{n = 300}$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	3.615	0.615	3.413	3.124	0.124	5.51	3.049	0.049	5.846
$\hat{\boldsymbol{\beta}}$	0.431	−0.019	0.203	0.557	0.107	0.376	0.576	0.126	0.403
$\hat{\boldsymbol{\sigma}}$	0.843	0.193	0.041	0.843	0.193	0.041	0.842	0.192	0.04
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	5.032	2.032	4.813	3.965	0.965	6.581	3.98	0.98	7.274
$\hat{\boldsymbol{\beta}}$	0.07	−0.38	0.195	0.347	−0.103	0.399	0.343	−0.107	0.449
$\hat{\boldsymbol{\sigma}}$	0.847	0.197	0.042	0.847	0.197	0.042	0.838	0.188	0.039

Table D.3b: Parameter estimation in log logistic model with normally distributed covariate, $\mu = 4$, $\beta = 0.25$ and $\sigma = 0.45$

	Midpoint Imputation			**Conditional Mean Imputation**			**Simultaneous Maximization**		
	Mean	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
					$n = 50$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\mu}$	4.28	0.28	11.496	3.904	−0.096	22.925	3.809	−0.191	27.724
$\hat{\beta}$	0.278	0.028	0.756	0.373	0.123	1.526	0.397	0.147	1.839
$\hat{\sigma}$	0.591	0.141	0.032	0.591	0.141	0.032	0.584	0.134	0.03
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\mu}$	5.226	1.226	4.15	4.799	0.799	61.182	4.9	0.9	77.528
$\hat{\beta}$	0.033	−0.217	0.251	0.144	−0.106	4.132	0.117	−0.133	5.211
$\hat{\sigma}$	0.572	0.122	0.025	0.573	0.123	0.026	0.513	0.063	0.02
					$n = 150$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\mu}$	4.478	0.478	3.004	4.206	0.206	5.282	4.161	0.161	5.791
$\hat{\beta}$	0.222	−0.028	0.185	0.291	0.041	0.347	0.302	0.052	0.382
$\hat{\sigma}$	0.577	0.127	0.019	0.577	0.127	0.019	0.575	0.125	0.019
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\mu}$	5.176	1.176	2.179	4.474	0.474	7.634	4.422	0.422	7.851
$\hat{\beta}$	0.048	−0.202	0.1	0.23	−0.02	0.506	0.242	−0.008	0.53
$\hat{\sigma}$	0.582	0.132	0.021	0.582	0.132	0.021	0.568	0.118	0.017
					$n = 300$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\mu}$	4.436	0.436	1.718	4.162	0.162	2.69	4.114	0.114	2.842
$\hat{\beta}$	0.234	−0.016	0.1	0.304	0.054	0.178	0.316	0.066	0.189
$\hat{\sigma}$	0.582	0.132	0.019	0.583	0.133	0.019	0.582	0.132	0.019
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\mu}$	5.178	1.178	1.755	4.543	0.543	3.456	4.578	0.578	3.635
$\hat{\beta}$	0.047	−0.203	0.068	0.212	−0.038	0.219	0.202	−0.048	0.231
$\hat{\sigma}$	0.586	0.136	0.02	0.586	0.136	0.02	0.579	0.129	0.018

D.1.4 Log logistic regression models with Weibull-distributed covariate

Table D.4a: Parameter estimation in log logistic model with Weibull distributed covariate, $\mu = 3$, $\beta = 0.45$ and $\sigma = 0.65$

	Midpoint Imputation			**Conditional Mean Imputation**			**Simultaneous Maximization**		
	Mean	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
					$n = 50$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\mu}$	3.54	0.54	2.56	3.327	0.327	2.899	3.226	0.226	3.075
$\hat{\beta}$	0.452	0.002	0.163	0.508	0.058	0.205	0.534	0.084	0.225
$\hat{\sigma}$	0.827	0.177	0.053	0.828	0.178	0.053	0.819	0.169	0.051
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\mu}$	4.39	1.39	3.92	4.397	1.397	4.787	4.277	1.277	5.495
$\hat{\beta}$	0.224	−0.226	0.202	0.232	−0.218	0.282	0.271	−0.179	0.366
$\hat{\sigma}$	0.84	0.19	0.056	0.842	0.192	0.057	0.804	0.154	0.048
					$n = 150$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\mu}$	3.527	0.527	0.99	3.35	0.35	1.019	3.318	0.318	1.018
$\hat{\beta}$	0.45	0.0	0.052	0.497	0.047	0.068	0.505	0.055	0.07
$\hat{\sigma}$	0.831	0.181	0.039	0.832	0.182	0.04	0.828	0.178	0.039
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\mu}$	4.367	1.367	2.535	4.571	1.571	3.127	4.594	1.594	3.262
$\hat{\beta}$	0.227	−0.223	0.099	0.18	−0.27	0.128	0.178	−0.272	0.138
$\hat{\sigma}$	0.855	0.205	0.049	0.859	0.209	0.051	0.851	0.201	0.048
					$n = 300$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\mu}$	3.548	0.548	0.592	3.378	0.378	0.517	3.363	0.363	0.511
$\hat{\beta}$	0.447	−0.003	0.022	0.492	0.042	0.03	0.496	0.045	0.031
$\hat{\sigma}$	0.842	0.192	0.04	0.842	0.192	0.04	0.839	0.189	0.039
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\mu}$	4.348	1.348	2.101	4.63	1.63	2.882	4.679	1.679	3.045
$\hat{\beta}$	0.232	−0.218	0.069	0.163	−0.287	0.102	0.154	−0.296	0.108
$\hat{\sigma}$	0.857	0.207	0.046	0.861	0.211	0.048	0.858	0.208	0.047

Table D.4b: Parameter estimation in log logistic model with Weibull distributed covariate, $\mu = 4$, $\beta = 0.25$ and $\sigma = 0.45$

	Midpoint Imputation			**Conditional Mean Imputation**			**Simultaneous Maximization**		
	Mean	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
					$\boldsymbol{n = 50}$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.347	0.347	1.171	4.235	0.235	1.448	4.181	0.181	1.536
$\hat{\boldsymbol{\beta}}$	0.259	0.009	0.077	0.289	0.039	0.104	0.303	0.053	0.113
$\hat{\boldsymbol{\sigma}}$	0.569	0.119	0.023	0.57	0.12	0.024	0.564	0.114	0.022
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.796	0.796	1.626	4.774	0.774	2.051	4.746	0.746	2.574
$\hat{\boldsymbol{\beta}}$	0.138	−0.112	0.09	0.151	−0.099	0.134	0.162	−0.088	0.187
$\hat{\boldsymbol{\sigma}}$	0.574	0.124	0.026	0.575	0.125	0.026	0.547	0.097	0.022
					$\boldsymbol{n = 150}$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.358	0.358	0.46	4.252	0.252	0.486	4.225	0.225	0.489
$\hat{\boldsymbol{\beta}}$	0.255	0.005	0.025	0.282	0.032	0.032	0.289	0.039	0.034
$\hat{\boldsymbol{\sigma}}$	0.58	0.13	0.02	0.58	0.13	0.02	0.578	0.128	0.02
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.806	0.806	0.95	4.927	0.927	1.157	4.942	0.942	1.198
$\hat{\boldsymbol{\beta}}$	0.133	−0.117	0.036	0.106	−0.144	0.045	0.104	−0.146	0.048
$\hat{\boldsymbol{\sigma}}$	0.585	0.135	0.022	0.587	0.137	0.022	0.582	0.132	0.021
					$\boldsymbol{n = 300}$				
				Narrow symmetric intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.403	0.403	0.322	4.308	0.308	0.294	4.297	0.297	0.291
$\hat{\boldsymbol{\beta}}$	0.243	−0.007	0.011	0.268	0.018	0.014	0.27	0.021	0.015
$\hat{\boldsymbol{\sigma}}$	0.584	0.134	0.02	0.585	0.135	0.02	0.583	0.133	0.02
				Current status data intervals $[Z_l, Z_r]$					
$\hat{\boldsymbol{\mu}}$	4.825	0.825	0.812	4.967	0.967	1.058	4.995	0.995	1.117
$\hat{\boldsymbol{\beta}}$	0.129	−0.121	0.025	0.095	−0.155	0.035	0.09	−0.16	0.037
$\hat{\boldsymbol{\sigma}}$	0.591	0.141	0.021	0.593	0.143	0.022	0.591	0.141	0.021

D.2 Relative risk, odds ratio, and conditional median times

The next two tables contain the estimation results of the relative risk and the odds ratio, respectively, the following four the results of the conditional median times. These measures are estimated by:

$$\widehat{\mathrm{RR}} = \widehat{\mathrm{OR}} = \exp\big(-\hat{\beta}/\hat{\sigma}\big),$$

$$\widehat{\mathrm{Med}}(Y|Z) = \begin{cases} \exp\big(\hat{\mu} + \hat{\beta}\ln(Z)\big)\ln(2)^{\hat{\sigma}} & \text{Weibull regression model,} \\ \exp\big(\hat{\mu} + \hat{\beta}\ln(Z)\big) & \text{Log logistic regression model.} \end{cases}$$

As mentioned in Section 7.4, in about 1–5% of the data sets of the simulation settings with a normally distributed covariate, conditional mean imputation and simultaneous maximization have furnished a few very extreme values given $\hat{\beta} < 0$ and $\hat{\sigma} \approx 0$. For this reason, values of $\widehat{\mathrm{RR}}$ and $\widehat{\mathrm{OR}}$ beyond 75 as well as $\widehat{\mathrm{Med}}(Y|Z) > 2000$ have been neglected for the calculation the estimator's mean. Note that such results have only occurred with $n = 50$.

In Tables D.6a through D.6d, we have not added the MSE, because of very big values. These are due to the large bias caused by a systematic overestimation of the model constant μ.

Table D.5a: Estimation of the relative risk in Weibull regression models

	Midpoint Imputation			Conditional Mean Imputation			Simultaneous Maximization		
	Mean	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
				$\boldsymbol{\mu = 3, \beta = 0.45, \sigma = 0.65}$[a]					
				Distribution of Z: Normal					
$\boldsymbol{n = 50}$[b]	0.815	0.315	2.087	1.142	0.642	17.067	1.28	0.78	28.161
	1.068	0.568	0.961	2.058	1.558	28.868	2.205	1.705	42.744
$\boldsymbol{n = 150}$	0.651	0.151	0.161	0.608	0.108	0.25	0.6	0.1	0.271
	0.934	0.434	0.262	0.858	0.358	0.964	0.84	0.339	1.463
$\boldsymbol{n = 300}$	0.588	0.088	0.056	0.519	0.019	0.069	0.508	0.008	0.071
	0.905	0.405	0.192	0.669	0.169	0.163	0.658	0.158	0.18
				Distribution of Z: Weibull					
$\boldsymbol{n = 50}$	0.541	0.041	0.048	0.521	0.021	0.052	0.492	−0.008	0.059
	0.751	0.251	0.144	0.803	0.303	0.212	0.743	0.243	0.288
$\boldsymbol{n = 150}$	0.519	0.019	0.011	0.491	−0.009	0.012	0.478	−0.022	0.012
	0.722	0.222	0.067	0.8	0.3	0.111	0.789	0.289	0.114
$\boldsymbol{n = 300}$	0.525	0.025	0.005	0.496	−0.004	0.005	0.489	−0.011	0.005
	0.734	0.234	0.064	0.821	0.321	0.113	0.823	0.323	0.119
				$\boldsymbol{\mu = 4, \beta = 0.25, \sigma = 0.45}$[c]					
				Distribution of Z: Normal					
$\boldsymbol{n = 50}$	1.032	0.458	1.757	1.309	0.735	6.891	1.559	0.985	17.922
	1.071	0.497	0.773	2.692	2.118	44.567	2.317	1.743	51.435
$\boldsymbol{n = 150}$	0.689	0.115	0.183	0.673	0.099	0.449	0.68	0.106	0.642
	0.939	0.365	0.217	0.88	0.306	1.346	0.814	0.241	1.143
$\boldsymbol{n = 300}$	0.649	0.075	0.071	0.59	0.016	0.101	0.583	0.009	0.105
	0.932	0.358	0.159	0.773	0.199	0.213	0.75	0.176	0.226
				Distribution of Z: Weibull					
$\boldsymbol{n = 50}$	0.646	0.072	0.085	0.627	0.053	0.09	0.604	0.03	0.102
	0.817	0.243	0.166	0.866	0.292	0.261	0.829	0.255	0.395
$\boldsymbol{n = 150}$	0.606	0.032	0.014	0.579	0.005	0.015	0.569	−0.005	0.016
	0.779	0.205	0.062	0.837	0.263	0.092	0.837	0.263	0.101
$\boldsymbol{n = 300}$	0.596	0.022	0.007	0.568	−0.006	0.007	0.562	−0.011	0.008
	0.78	0.206	0.053	0.852	0.278	0.088	0.862	0.288	0.096

[a] Relative risk equal to 0.5

[b] First line: narrow intervals $[Z_l, Z_r]$, second: current status data

[c] Relative risk equal to 0.574

Table D.5b: Estimation of the odds ratio in log logistic regression models

	Midpoint Imputation			Conditional Mean Imputation			Simultaneous Maximization		
	Mean	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
				$\boldsymbol{\mu = 3, \beta = 0.45, \sigma = 0.65}$[a]					
				Distribution of Z: Normal					
$\boldsymbol{n = 50}$[b]	1.863	1.363	25.322	2.52	2.02	45.271	3.17	2.67	86.446
	1.288	0.788	2.509	3.739	3.239	91.185	4.153	3.653	128.851
$\boldsymbol{n = 150}$	0.737	0.237	0.541	0.789	0.289	1.982	0.806	0.306	2.364
	0.98	0.48	0.391	1.286	0.786	5.227	1.548	1.048	13.467
$\boldsymbol{n = 300}$	0.694	0.194	0.233	0.679	0.179	0.481	0.677	0.176	0.544
	0.954	0.454	0.278	0.877	0.377	0.803	0.923	0.423	1.103.
				Distribution of Z: Weibull					
$\boldsymbol{n = 50}$	0.647	0.147	0.16	0.62	0.12	0.166	0.608	0.108	0.195
	0.847	0.347	0.308	0.879	0.379	0.436	0.917	0.417	0.827
$\boldsymbol{n = 150}$	0.602	0.102	0.042	0.575	0.075	0.042	0.568	0.068	0.042
	0.79	0.29	0.129	0.837	0.337	0.165	0.841	0.341	0.177
$\boldsymbol{n = 300}$	0.596	0.096	0.021	0.568	0.068	0.018	0.564	0.064	0.017
	0.774	0.274	0.094	0.837	0.337	0.132	0.846	0.346	0.14
				$\boldsymbol{\mu = 4, \beta = 0.25, \sigma = 0.45}$[c]					
				Distribution of Z: Normal					
$\boldsymbol{n = 50}$	1.786	1.212	19.77	2.578	2.004	51.778	2.722	2.148	57.408
	1.304	0.73	2.215	3.38	2.806	77.747	3.401	2.827	98.966
$\boldsymbol{n = 150}$	0.91	0.336	0.898	1.05	0.476	3.113	1.116	0.542	5.35
	1.002	0.428	0.384	1.448	0.874	8.048	1.615	1.041	15.172
$\boldsymbol{n = 300}$	0.78	0.206	0.316	0.772	0.198	0.546	0.77	0.196	0.598
	0.959	0.385	0.226	0.951	0.377	0.945	0.996	0.422	1.134.
				Distribution of Z: Weibull					
$\boldsymbol{n = 50}$	0.71	0.136	0.155	0.703	0.129	0.216	0.694	0.12	0.252
	0.888	0.314	0.332	0.921	0.347	0.484	0.974	0.4	0.885
$\boldsymbol{n = 150}$	0.667	0.093	0.044	0.642	0.068	0.046	0.634	0.06	0.046
	0.821	0.247	0.108	0.864	0.29	0.138	0.868	0.295	0.149
$\boldsymbol{n = 300}$	0.67	0.096	0.025	0.645	0.071	0.023	0.642	0.068	0.023
	0.814	0.24	0.076	0.863	0.289	0.105	0.872	0.298	0.113

[a] Odds ratio equal to 0.5

[b] First line: narrow intervals $[Z_l, Z_r]$, second: current status data

[c] Odds ratio equal to 0.574

Table D.6a: Conditional median estimation in Weibull regression models with normally distributed covariate

	Midpoint Imputation		**Cond. Mean Imputation**		**Simultaneous Maximization**	
	Mean	**Bias**	**Mean**	**Bias**	**Mean**	**Bias**
			$\boldsymbol{\mu = 3, \beta = 0.45, \sigma = 0.65}$[a]			
			$\mathbf{Med}(Y\|Z = 20)$			
$\boldsymbol{n = 50}$[b]	98.84	37.9	105.09	44.15	106.33	45.4
	124.66	63.72	145.48	84.54	154.83	93.9
$\boldsymbol{n = 150}$	91.92	30.99	85.68	24.75	84.42	23.48
	119.75	58.82	103.94	43.0	102.41	41.48
$\boldsymbol{n = 300}$	88.38	27.44	80.55	19.61	79.22	18.28
	119.1	58.16	96.12	35.19	96.4	35.46
			$\mathbf{Med}(Y\|Z = 50)$			
$\boldsymbol{n = 50}$	127.37	35.33	127.4	35.37	127.09	35.05
	130.97	38.93	132.25	40.21	136.68	44.64
$\boldsymbol{n = 150}$	125.49	33.46	125.32	33.28	124.95	32.91
	127.9	35.87	129.84	37.81	132.01	39.97
$\boldsymbol{n = 300}$	126.32	34.28	126.19	34.16	125.67	33.64
	128.14	36.1	130.21	38.18	131.65	39.61
			$\boldsymbol{\mu = 4, \beta = 0.25, \sigma = 0.45}$[c]			
			$\mathbf{Med}(Y\|Z = 20)$			
$\boldsymbol{n = 50}$	139.17	41.27	139.15	41.25	141.75	43.84
	150.28	52.38	172.76	74.86	178.61	80.71
$\boldsymbol{n = 150}$	124.79	26.89	119.29	21.39	118.43	20.53
	147.07	49.17	130.26	32.35	126.94	29.03
$\boldsymbol{n = 300}$	123.75	25.85	117.01	19.11	116.08	18.17
	148.65	50.75	133.46	35.56	132.06	34.16
			$\mathbf{Med}(Y\|Z = 50)$			
$\boldsymbol{n = 50}$	153.55	30.44	153.5	30.39	153.29	30.18
	154.9	31.79	156.81	33.1	159.45	36.34
$\boldsymbol{n = 150}$	152.39	29.28	152.28	29.17	152.0	28.89
	153.83	30.72	155.31	32.2	157.28	34.17
$\boldsymbol{n = 300}$	152.55	29.44	152.44	29.33	152.17	29.06
	154.33	31.22	155.37	32.26	156.49	33.38

[a] $\text{Med}(Y|Z = 20) = 60.94$, $\text{Med}(Y|Z = 50) = 92.04$

[b] First line: narrow intervals $[Z_l, Z_r]$, second: current status data

[c] $\text{Med}(Y|Z = 20) = 97.91$, $\text{Med}(Y|Z = 50) = 123.11$

Table D.6b: Conditional median estimation in Weibull regression models with Weibull-distributed covariate

	Midpoint Imputation		**Cond. Mean Imputation**		**Simultaneous Maximization**	
	Mean	**Bias**	**Mean**	**Bias**	**Mean**	**Bias**
			$\boldsymbol{\mu = 3, \beta = 0.45, \sigma = 0.65}$[a]			
			$\mathbf{Med}(Y\|Z = 20)$			
$\boldsymbol{n = 50}$[b]	84.5	23.57	82.01	21.08	80.15	19.22
	101.77	40.84	107.46	46.52	106.78	45.85
$\boldsymbol{n = 150}$	82.63	21.69	79.72	18.78	78.93	18.0
	99.06	38.12	107.24	46.3	109.11	48.17
$\boldsymbol{n = 300}$	82.89	21.95	79.99	19.05	79.59	18.65
	98.91	37.98	107.49	46.56	109.52	48.58
			$\mathbf{Med}(Y\|Z = 50)$			
$\boldsymbol{n = 50}$	127.4	35.37	127.8	35.76	128.71	36.67
	127.98	35.95	134.49	42.45	142.58	50.54
$\boldsymbol{n = 150}$	126.18	34.15	126.56	34.53	126.78	34.74
	124.44	32.4	126.43	34.39	129.87	37.84
$\boldsymbol{n = 300}$	126.07	34.04	126.43	34.4	126.47	34.43
	122.79	30.75	124.0	31.96	126.22	34.18
			$\boldsymbol{\mu = 4, \beta = 0.25, \sigma = 0.45}$[c]			
			$\mathbf{Med}(Y\|Z = 20)$			
$\boldsymbol{n = 50}$	123.51	25.61	121.4	23.49	119.97	22.07
	134.58	36.67	138.4	40.49	137.67	39.77
$\boldsymbol{n = 150}$	121.37	23.46	118.86	20.95	118.24	20.34
	134.07	36.16	139.48	41.58	140.99	43.09
$\boldsymbol{n = 300}$	121.39	23.49	118.97	21.07	118.63	20.72
	133.24	35.33	139.33	41.43	141.02	43.11
			$\mathbf{Med}(Y\|Z = 50)$			
$\boldsymbol{n = 50}$	152.59	29.48	152.8	29.69	153.44	30.33
	150.99	27.88	154.0	30.89	159.87	36.76
$\boldsymbol{n = 150}$	152.36	29.25	152.62	29.51	152.76	29.65
	151.28	28.17	152.68	29.57	154.42	31.31
$\boldsymbol{n = 300}$	153.11	30.0	153.37	30.26	153.4	30.29
	149.9	26.79	150.66	27.55	151.69	28.58

[a] $\text{Med}(Y|Z = 20) = 60.94$, $\text{Med}(Y|Z = 50) = 92.04$

[b] First line: narrow intervals $[Z_l, Z_r]$, second: current status data

[c] $\text{Med}(Y|Z = 20) = 97.91$, $\text{Med}(Y|Z = 50) = 123.11$

Table D.6c: Conditional median estimation in log logistic regression models with normally distributed covariate

	Midpoint Imputation		**Cond. Mean Imputation**		**Simultaneous Maximization**	
	Mean	**Bias**	**Mean**	**Bias**	**Mean**	**Bias**
			$\boldsymbol{\mu = 3, \beta = 0.45, \sigma = 0.65}$[a]			
			$\mathbf{Med}(Y\|Z = 20)$			
$\boldsymbol{n = 50}$[b]	213.52	136.19	227.81	150.48	230.75	153.42
	214.01	136.68	256.09	178.76	243.46	166.13
$\boldsymbol{n = 150}$	154.32	76.99	154.69	77.36	152.04	74.71
	194.96	117.63	204.72	127.39	203.53	126.20
$\boldsymbol{n = 300}$	147.27	69.94	140.52	63.19	139.4	62.07
	191.95	114.62	170.75	93.42	172.65	95.32
			$\mathbf{Med}(Y\|Z = 50)$			
$\boldsymbol{n = 50}$	207.13	90.33	207.17	90.37	206.62	89.82
	211.81	95.01	217.94	101.15	221.16	104.37
$\boldsymbol{n = 150}$	205.43	88.64	205.23	88.44	204.54	87.75
	206.28	89.48	209.59	92.8	209.81	93.01
$\boldsymbol{n = 300}$	202.16	85.36	201.95	85.16	201.32	84.53
	203.01	86.22	206.12	89.33	206.17	89.37
			$\boldsymbol{\mu = 4, \beta = 0.25, \sigma = 0.45}$[c]			
			$\mathbf{Med}(Y\|Z = 20)$			
$\boldsymbol{n = 50}$	229.0	113.54	237.33	121.86	235.32	119.86
	216.05	100.59	266.68	151.22	243.42	127.96
$\boldsymbol{n = 150}$	184.98	69.52	185.89	70.43	187.28	71.82
	207.9	92.44	209.3	93.84	207.32	91.86
$\boldsymbol{n = 300}$	178.08	62.62	172.12	56.66	170.92	55.46
	205.83	90.37	191.14	75.68	192.13	76.67
			$\mathbf{Med}(Y\|Z = 50)$			
$\boldsymbol{n = 50}$	217.67	72.49	217.4	72.21	216.94	71.75
	217.24	72.06	221.83	76.64	220.44	75.25
$\boldsymbol{n = 150}$	210.61	65.43	210.52	65.34	210.19	65.01
	214.92	69.74	216.78	71.6	216.68	71.49
$\boldsymbol{n = 300}$	211.65	66.47	211.5	66.31	211.15	65.96
	213.81	68.63	215.97	70.78	215.76	70.57

[a] $\text{Med}(Y|Z = 20) = 77.33$, $\text{Med}(Y|Z = 50) = 116.79$

[b] First line: narrow intervals $[Z_l, Z_r]$, second: current status data

[c] $\text{Med}(Y|Z = 20) = 115.46$, $\text{Med}(Y|Z = 50) = 145.19$

Table D.6d: Conditional median estimation in log logistic regression models with Weibull-distributed covariate

	Midpoint Imputation		**Cond. Mean Imputation**		**Simultaneous Maximization**	
	Mean	**Bias**	**Mean**	**Bias**	**Mean**	**Bias**
			$\boldsymbol{\mu = 3, \beta = 0.45, \sigma = 0.65}$[a]			
			$\mathbf{Med}(Y\|Z = 20)$			
$\boldsymbol{n = 50}$[b]	143.8	66.47	138.87	61.54	136.91	59.58
	167.46	90.13	172.26	94.93	172.28	94.95
$\boldsymbol{n = 150}$	133.95	56.62	129.3	51.97	128.46	51.13
	158.9	81.57	168.38	91.05	171.29	93.96
$\boldsymbol{n = 300}$	133.91	56.58	129.19	51.86	128.7	51.37
	156.23	78.9	168.37	91.04	172.16	94.83
			$\mathbf{Med}(Y\|Z = 50)$			
$\boldsymbol{n = 50}$	209.73	92.93	211.1	94.31	211.97	95.18
	202.25	85.46	214.07	97.27	227.52	110.73
$\boldsymbol{n = 150}$	200.52	83.73	201.22	84.43	201.32	84.53
	194.41	77.62	199.04	82.24	203.47	86.67
$\boldsymbol{n = 300}$	201.26	84.46	201.94	85.15	201.87	85.08
	192.89	76.1	196.01	79.22	199.3	82.51
			$\boldsymbol{\mu = 4, \beta = 0.25, \sigma = 0.45}$[c]			
			$\mathbf{Med}(Y\|Z = 20)$			
$\boldsymbol{n = 50}$	173.37	57.91	170.36	54.9	168.96	53.5
	188.05	72.59	191.27	75.81	192.56	77.1
$\boldsymbol{n = 150}$	168.96	53.5	165.35	49.89	164.49	49.03
	184.11	68.65	190.81	75.35	192.8	77.34
$\boldsymbol{n = 300}$	170.02	54.56	166.63	51.17	166.21	50.75
	184.13	68.67	191.59	76.13	194.02	78.56
			$\mathbf{Med}(Y\|Z = 50)$			
$\boldsymbol{n = 50}$	217.24	72.05	218.12	72.93	218.73	73.54
	212.41	67.23	222.39	77.21	228.75	83.57
$\boldsymbol{n = 150}$	212.62	67.44	213.05	67.87	213.22	68.04
	207.38	62.2	210.24	65.06	212.72	67.53
$\boldsymbol{n = 300}$	211.86	66.68	212.24	67.06	212.22	67.04
	207.08	61.9	209.3	64.11	211.24	66.05

[a] $\text{Med}(Y|Z = 20) = 77.33$, $\text{Med}(Y|Z = 50) = 116.79$

[b] First line: narrow intervals $[Z_l, Z_r]$, second: current status data

[c] $\text{Med}(Y|Z = 20) = 115.46$, $\text{Med}(Y|Z = 50) = 145.19$

D.3 Quantiles of the covariate's distribution function

The following eight tables contain the results of the quantile estimation of the covariate's distribution function. The Turnbull estimator has been accomplished with the S-Plus function `qkaplanMeier`, whereas the AMPL programmes for simultaneous maximization included the calculation of the empirical quantiles:

$$\hat{z}_p = \min\left\{s_j \Big| \sum_{l=1}^{j} \hat{\omega}_l \geq p\right\}.$$

Table D.7a: Quantile estimation for Weibull regression models with normally distributed covariate, $\mu = 3$, $\beta = 0.45$, $\sigma = 0.65$

	Turnbull Estimator[a]			**Simult. Estimation**		
Quantile	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
			$n = 50$[b]			
10%	38.29	1.11	13.2	38.86	1.67	16.97
25%	43.61	0.35	8.71	44.22	0.97	10.27
50%	49.42	−0.58	7.9	49.9	−0.1	8.63
75%	55.22	−1.52	10.26	55.91	−0.84	9.72
90%	59.57	−3.25	20.17	61.0	−1.82	16.91
10%	34.17	−3.01	54.08	31.62	−5.56	188.75
25%	38.31	−4.95	50.82	38.78	−4.47	64.56
50%	44.62	−5.38	47.61	45.34	−4.66	44.5
75%	50.94	−5.8	51.53	52.48	−4.26	41.57
90%	54.32	−8.5	86.39	58.84	−3.98	47.61
			$n = 150$			
10%	38.05	0.87	6.42	38.54	1.35	8.71
25%	43.44	0.18	3.64	43.93	0.68	4.54
50%	49.72	−0.28	3.54	50.2	0.2	4.03
75%	55.53	−1.21	5.07	56.0	−0.75	4.84
90%	61.06	−1.76	7.89	61.63	−1.19	7.12
10%	32.28	−4.9	44.53	32.4	−4.78	69.36
25%	38.04	−5.22	41.92	38.68	−4.57	37.61
50%	45.12	−4.88	32.52	45.77	−4.23	28.22
75%	52.72	−4.02	25.71	53.31	−3.43	22.55
90%	58.54	−4.28	28.43	60.42	−2.39	23.04
			$n = 300$			
10%	37.79	0.61	3.26	38.24	1.05	6.23
25%	43.39	0.13	2.0	43.88	0.62	3.87
50%	49.51	−0.49	2.12	50.03	0.03	2.47
75%	55.57	−1.17	3.36	56.03	−0.72	3.12
90%	61.21	−1.61	5.45	61.72	−1.1	5.22
10%	31.19	−5.99	50.93	31.85	−5.34	50.94
25%	37.74	−5.52	38.71	38.26	−5.0	34.05
50%	45.01	−4.99	29.92	45.54	−4.45	25.64
75%	52.6	−4.14	22.62	53.13	−3.61	19.31
90%	59.5	−3.32	18.86	60.47	−2.35	16.96

[a] calculated with S-Plus function `qkaplanMeier`

[b] The first block of estimation results refers always to narrow intervals $[Z_l, Z_r]$, the second to current status data

Table D.7b: Quantile estimation for Weibull regression models with normally distributed covariate, $\mu = 4$, $\beta = 0.25$, $\sigma = 0.45$

	Turnbull Estimator[a]			Simult. Estimation		
Quantile	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
			$n = 50$[b]			
10%	38.06	0.88	11.93	38.58	1.39	14.9
25%	43.46	0.2	8.51	43.93	0.67	10.27
50%	49.42	−0.58	7.31	49.94	−0.06	7.65
75%	55.35	−1.39	10.28	56.05	−0.69	10.6
90%	59.38	−3.44	21.08	61.16	−1.65	17.21
10%	34.26	−2.92	52.22	32.1	−5.08	163.65
25%	38.3	−4.96	53.65	38.92	−4.34	54.87
50%	45.06	−4.94	42.47	45.6	−4.4	41.51
75%	51.17	−5.57	49.95	52.45	−4.3	42.93
90%	53.87	−8.95	94.85	58.54	−4.28	51.56
			$n = 150$			
10%	37.75	0.57	5.16	38.25	1.06	6.96
25%	43.39	0.13	3.48	43.94	0.69	4.33
50%	49.64	−0.36	2.79	50.17	0.17	3.13
75%	55.74	−1.0	4.76	56.21	−0.53	4.68
90%	60.93	−1.89	8.77	61.53	−1.29	7.74
10%	32.29	−4.89	44.43	32.56	−4.63	58.87
25%	37.84	−5.42	43.44	38.64	−4.61	35.61
50%	45.28	−4.72	30.34	45.89	−4.11	26.12
75%	52.72	−4.02	25.89	53.22	−3.52	23.96
90%	58.29	−4.53	31.15	60.18	−2.64	24.38
			$n = 300$			
10%	37.79	0.61	3.65	38.36	1.17	5.36
25%	43.4	0.14	1.98	43.91	0.65	2.75
50%	49.57	−0.43	1.85	50.08	0.08	2.26
75%	55.65	−1.09	3.12	56.16	−0.58	2.74
90%	61.21	−1.61	5.87	61.67	−1.15	5.1
10%	31.34	−5.84	51.16	32.19	−4.99	42.1
25%	37.89	−5.37	37.54	38.52	−4.73	32.34
50%	45.16	−4.84	28.58	45.74	−4.27	24.11
75%	52.85	−3.89	21.89	53.38	−3.37	18.96
90%	59.8	−3.02	17.88	60.67	−2.15	15.55

[a] calculated with S-Plus function `qkaplanMeier`

[b] The first block of estimation results refers always to narrow intervals $[Z_l, Z_r]$, the second to current status data

Table D.8a: Quantile estimation for Weibull regression models with Weibull-distributed covariate, $\mu = 3$, $\beta = 0.45$, $\sigma = 0.65$

	Turnbull Estimator[a]			**Simult. Estimation**		
Quantile	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
			$n = 50$[a]			
10%	17.36	1.13	20.99	17.98	1.75	26.54
25%	26.7	−0.12	27.47	27.33	0.51	31.0
50%	41.16	−0.47	30.14	41.69	0.06	36.19
75%	57.58	−1.29	44.3	58.12	−0.75	53.87
90%	72.95	−2.92	66.74	74.72	−1.15	92.54
10%	10.85	−5.38	61.55	11.8	−4.43	65.65
25%	13.72	−13.1	205.13	15.1	−11.71	188.39
50%	23.64	−17.99	407.18	26.1	−15.53	349.96
75%	47.17	−11.7	354.45	54.83	−4.04	393.34
90%	53.55	−22.32	591.88	78.59	2.72	256.73
			$n = 150$			
10%	16.4	0.17	8.61	17.05	0.82	10.52
25%	26.4	−0.42	9.91	26.95	0.13	10.4
50%	41.01	−0.62	11.47	41.5	−0.13	12.55
75%	58.12	−0.75	16.96	58.61	−0.26	17.81
90%	74.91	−0.96	30.95	75.44	−0.43	32.06
10%	9.07	−7.16	63.17	9.55	−6.68	61.89
25%	11.9	−14.92	236.74	12.93	−13.88	213.12
50%	21.34	−20.29	456.44	22.88	−18.75	403.55
75%	55.41	−3.46	187.27	57.18	−1.7	234.86
90%	68.49	−7.38	113.29	87.2	11.32	255.69
			$n = 300$			
10%	16.52	0.29	4.92	17.02	0.79	5.82
25%	26.58	−0.24	4.9	27.16	0.35	5.59
50%	41.0	−0.63	7.47	41.57	−0.06	7.91
75%	58.09	−0.78	8.85	58.58	−0.29	8.83
90%	74.6	−1.27	13.93	75.09	−0.79	14.04
10%	7.96	−8.27	76.23	8.42	−7.81	71.62
25%	10.94	−15.88	262.41	11.75	−15.06	239.97
50%	20.39	−21.24	475.15	21.93	−19.7	415.97
75%	56.98	−1.89	149.26	58.11	−0.76	182.6
90%	80.11	4.24	58.17	91.74	15.87	303.7

[a] calculated with S-Plus function `qkaplanMeier`

[b] The first block of estimation results refers always to narrow intervals $[Z_l, Z_r]$, the second to current status data

Table D.8b: Quantile estimation for Weibull regression models with Weibull-distributed covariate, $\mu = 4$, $\beta = 0.25$, $\sigma = 0.45$

	Turnbull Estimator[a]			Simult. Estimation		
Quantile	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
			$n = 50$[b]			
10%	16.73	0.5	20.59	17.27	1.04	24.92
25%	26.52	−0.3	27.23	26.98	0.16	30.38
50%	40.84	−0.79	31.76	41.47	−0.16	32.03
75%	57.72	−1.15	48.66	58.24	−0.63	50.89
90%	73.7	−2.17	70.0	74.95	−0.92	80.31
10%	11.16	−5.07	61.7	12.2	−4.03	67.96
25%	14.24	−12.58	195.96	16.28	−10.54	161.93
50%	23.9	−17.73	402.9	25.46	−16.17	365.71
75%	47.51	−11.36	314.01	54.44	−4.44	387.15
90%	54.88	−20.99	499.41	78.63	2.76	243.62
			$n = 150$			
10%	16.64	0.41	9.05	17.1	0.87	10.77
25%	26.74	−0.08	10.44	27.2	0.38	11.95
50%	41.24	−0.39	12.4	41.7	0.07	12.97
75%	58.12	−0.75	16.56	58.59	−0.28	16.9
90%	74.59	−1.28	30.69	75.08	−0.79	30.82
10%	9.22	−7.01	61.32	9.98	−6.25	55.99
25%	11.99	−14.83	234.67	12.94	−13.88	213.3
50%	22.02	−19.61	426.8	23.16	−18.47	387.4
75%	54.85	−4.02	178.98	57.64	−1.23	250.87
90%	69.53	−6.34	94.81	86.7	10.83	238.07
			$n = 300$			
10%	16.31	0.08	5.77	16.87	0.64	7.08
25%	26.53	−0.29	5.99	27.04	0.22	6.45
50%	41.04	−0.59	6.65	41.53	−0.1	7.0
75%	58.09	−0.78	8.73	58.57	−0.3	9.08
90%	74.96	−0.91	14.89	75.46	−0.42	15.55
10%	7.82	−8.41	77.86	8.37	−7.86	70.53
25%	10.96	−15.86	261.03	11.82	−15.0	237.54
50%	21.14	−20.49	452.33	22.37	−19.26	407.26
75%	57.94	−0.93	161.39	58.95	0.08	194.18
90%	78.7	2.83	48.2	91.96	16.09	313.24

[a] calculated with S-Plus function `qkaplanMeier`

[b] The first block of estimation results refers always to narrow intervals $[Z_l, Z_r]$, the second to current status data

Table D.9a: Quantile estimation for log logistic regression models with normally distributed covariate, $\mu = 3$, $\beta = 0.45$, $\sigma = 0.65$

	Turnbull Estimator[a]			Simult. Estimation		
Quantile	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
			$n = 50$[b]			
10%	38.21	1.03	13.17	38.78	1.59	16.94
25%	43.63	0.37	8.72	44.13	0.87	10.63
50%	49.57	−0.43	7.8	50.1	0.1	8.38
75%	55.28	−1.46	10.03	55.81	−0.93	9.97
90%	59.47	−3.35	21.4	61.06	−1.76	16.58
10%	33.82	−3.36	64.87	31.74	−5.45	180.02
25%	38.8	−4.46	47.98	39.15	−4.1	61.28
50%	45.02	−4.98	43.9	45.66	−4.34	46.93
75%	51.34	−5.4	46.88	52.68	−4.07	47.17
90%	54.6	−8.22	83.25	58.8	−4.02	53.77
			$n = 150$			
10%	37.83	0.65	5.13	38.38	1.19	6.86
25%	43.38	0.12	4.05	43.9	0.65	5.21
50%	49.45	−0.55	3.54	49.98	−0.02	3.84
75%	55.69	−1.05	4.49	56.16	−0.58	4.33
90%	60.83	−1.99	8.89	61.4	−1.41	8.14
10%	32.44	−4.74	44.75	32.94	−4.24	57.53
25%	37.9	−5.36	42.49	38.47	−4.79	38.99
50%	45.32	−4.68	30.9	45.76	−4.25	28.83
75%	52.73	−4.01	25.63	53.26	−3.49	22.9
90%	58.31	−4.51	31.76	60.4	−2.41	23.92
			$n = 300$			
10%	37.82	0.64	3.13	38.35	1.17	4.61
25%	43.32	0.06	2.22	43.84	0.58	3.02
50%	49.49	−0.51	1.92	49.96	−0.03	2.08
75%	55.54	−1.2	3.63	56.04	−0.71	3.23
90%	61.09	−1.73	5.82	61.56	−1.26	5.06
10%	31.31	−5.87	52.27	31.71	−5.47	55.16
25%	37.83	−5.43	38.48	38.33	−4.93	34.97
50%	45.12	−4.88	29.15	45.58	−4.42	25.62
75%	52.63	−4.11	22.75	53.15	−3.6	19.66
90%	59.5	−3.32	19.32	60.49	−2.32	17.15

[a] calculated with S-Plus function `qkaplanMeier`

[b] The first block of estimation results refers always to narrow intervals $[Z_l, Z_r]$, the second to current status data

Table D.9b: Quantile estimation for log logistic regression models with normally distributed covariate, $\mu = 4$, $\beta = 0.25$, $\sigma = 0.45$

	Turnbull Estimator[a]			Simult. Estimation		
Quantile	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
			$n = 50$[b]			
10%	38.39	1.21	13.44	38.86	1.68	16.07
25%	43.94	0.68	8.58	44.36	1.11	10.46
50%	49.39	−0.61	7.08	49.91	−0.09	7.66
75%	55.26	−1.48	9.75	55.87	−0.87	9.91
90%	59.72	−3.1	18.67	61.22	−1.59	15.83
10%	34.2	−2.98	51.13	33.45	−3.74	122.87
25%	38.41	−4.85	48.02	39.12	−4.13	51.0
50%	44.96	−5.04	43.55	45.6	−4.4	41.87
75%	51.53	−5.21	43.95	52.74	−4.0	37.22
90%	54.03	−8.79	94.99	58.78	−4.04	53.31
			$n = 150$			
10%	37.72	0.54	5.31	38.21	1.03	6.83
25%	43.55	0.29	3.4	44.1	0.84	4.64
50%	49.56	−0.44	3.43	50.04	0.04	3.87
75%	55.66	−1.08	4.63	56.17	−0.58	4.3
90%	60.91	−1.91	8.53	61.53	−1.28	7.62
10%	32.58	−4.6	42.88	33.06	−4.12	52.96
25%	37.89	−5.37	41.16	38.39	−4.87	37.35
50%	45.11	−4.89	32.26	45.57	−4.43	29.34
75%	52.6	−4.14	26.26	53.11	−3.63	24.0
90%	58.4	−4.42	30.03	60.21	−2.61	23.06
			$n = 300$			
10%	37.95	0.77	3.35	38.49	1.31	5.0
25%	43.41	0.15	1.95	43.91	0.65	2.91
50%	49.63	−0.37	1.75	50.12	0.12	2.1
75%	55.62	−1.12	3.44	56.11	−0.63	3.19
90%	61.18	−1.64	5.28	61.64	−1.18	4.52
10%	31.25	−5.93	50.69	31.72	−5.46	50.36
25%	37.8	−5.46	37.48	38.26	−5.0	34.51
50%	45.21	−4.79	28.37	45.68	−4.32	24.77
75%	52.65	−4.09	22.02	53.09	−3.66	19.47
90%	59.71	−3.11	18.14	60.67	−2.14	15.79

[a] calculated with S-Plus function `qkaplanMeier`

[b] The first block of estimation results refers always to narrow intervals $[Z_l, Z_r]$, the second to current status data

Table D.10a: Quantile estimation for log logistic regression models with Weibull-distributed covariate, $\mu = 3$, $\beta = 0.45$, $\sigma = 0.65$

	Turnbull Estimator[a]			Simult. Estimation		
Quantile	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
			$n = 50$[b]			
10%	17.21	0.98	21.94	17.78	1.55	27.04
25%	27.21	0.39	24.26	27.66	0.85	26.74
50%	41.03	−0.6	29.63	41.55	−0.08	30.64
75%	57.83	−1.04	40.14	58.36	−0.51	41.76
90%	73.14	−2.73	59.44	74.25	−1.62	71.39
10%	11.29	−4.94	58.39	12.29	−3.94	60.44
25%	14.41	−12.41	190.25	15.7	−11.12	172.48
50%	24.92	−16.71	373.31	26.17	−15.45	345.11
75%	46.9	−11.97	327.97	54.93	−3.94	399.39
90%	53.55	−22.32	573.0	79.36	3.49	246.89
			$n = 150$			
10%	16.51	0.28	8.55	17.04	0.81	10.18
25%	26.46	−0.36	10.95	27.02	0.2	11.57
50%	40.93	−0.7	11.98	41.44	−0.19	12.44
75%	58.17	−0.7	16.65	58.64	−0.23	17.23
90%	74.34	−1.53	28.66	74.8	−1.07	29.48
10%	8.98	−7.25	64.88	9.67	−6.56	58.16
25%	11.89	−14.93	238.19	12.42	−14.39	225.39
50%	21.86	−19.77	436.82	22.8	−18.83	406.14
75%	56.83	−2.04	171.35	59.78	0.91	233.41
90%	69.32	−6.55	93.03	87.7	11.83	250.43
			$n = 300$			
10%	16.46	0.23	5.62	16.99	0.76	6.77
25%	26.51	−0.31	5.71	26.99	0.17	6.45
50%	41.16	−0.47	6.27	41.69	0.06	6.7
75%	58.0	−0.87	9.05	58.42	−0.45	9.6
90%	74.69	−1.18	14.07	75.13	−0.74	14.76
10%	7.8	−8.43	77.98	8.38	−7.85	70.44
25%	11.31	−15.51	251.58	11.99	−14.83	233.98
50%	20.82	−20.81	460.41	21.76	−19.87	426.07
75%	57.14	−1.73	157.0	57.95	−0.92	175.99
90%	77.63	1.76	51.54	92.17	16.29	316.58

[a] calculated with S-Plus function `qkaplanMeier`

[b] The first block of estimation results refers always to narrow intervals $[Z_l, Z_r]$, the second to current status data

Table D.10b: Quantile estimation for log logistic regression models with Weibull-distributed covariate, $\mu = 4$, $\beta = 0.25$, $\sigma = 0.45$

	Turnbull Estimator[a]			Simult. Estimation		
Quantile	**Mean**	**Bias**	**MSE**	**Mean**	**Bias**	**MSE**
			$n = 50$[b]			
10%	16.91	0.68	21.62	17.17	0.94	26.09
25%	26.57	−0.25	25.87	27.22	0.4	27.43
50%	41.14	−0.49	31.04	41.62	−0.01	34.22
75%	57.86	−1.01	45.78	58.32	−0.55	48.0
90%	73.47	−2.4	68.33	74.97	−0.9	83.54
10%	10.99	−5.24	59.83	12.16	−4.07	59.42
25%	13.87	−12.95	201.57	14.96	−11.86	187.05
50%	23.94	−17.69	407.03	25.33	−16.3	368.05
75%	47.65	−11.22	336.14	54.51	−4.36	367.17
90%	54.84	−21.03	510.49	78.38	2.51	253.82
			$n = 150$			
10%	16.67	0.44	9.37	17.25	1.02	11.5
25%	27.06	0.24	10.69	27.58	0.76	12.21
50%	41.05	−0.58	11.69	41.54	−0.09	12.44
75%	58.04	−0.83	19.01	58.56	−0.31	19.48
90%	74.38	−1.49	28.03	74.87	−1.0	29.9
10%	8.93	−7.3	65.89	9.74	−6.49	56.59
25%	11.6	−15.22	247.25	12.38	−14.44	228.07
50%	21.63	−20.0	446.1	22.45	−19.18	419.03
75%	53.69	−5.18	186.1	57.37	−1.5	266.82
90%	69.82	−6.05	103.19	87.47	11.6	251.0
			$n = 300$			
10%	16.4	0.17	5.6	16.96	0.73	7.03
25%	26.54	−0.28	5.89	27.07	0.25	6.75
50%	41.09	−0.54	6.49	41.54	−0.08	7.04
75%	58.14	−0.73	9.41	58.68	−0.2	9.74
90%	74.76	−1.11	14.85	75.29	−0.58	14.94
10%	7.95	−8.28	76.97	8.69	−7.54	65.97
25%	11.13	−15.69	256.29	11.66	−15.16	242.15
50%	20.76	−20.87	463.01	21.71	−19.92	426.74
75%	56.73	−2.14	155.13	58.77	−0.1	199.8
90%	76.89	1.02	47.55	91.88	16.01	315.75

[a] calculated with S-Plus function `qkaplanMeier`

[b] The first block of estimation results refers always to narrow intervals $[Z_l, Z_r]$, the second to current status data