

```
210 0 OUTPUT ACTIVATE CumulativeHazardFunctionOutput.  
210 0 M> OUTPUT ACTIVATE CumulativeHazardFunctionOutput.  
211 0 TITLE 'Cumulative Hazard Function'.  
211 0 M> TITLE 'Cumulative Hazard Function'.
```

Cumulative Hazard Function

```

212 0 GET DATA /TYPE=TXT /FILE='D:\DATA ANALYSIS\0 Survival Analysis\Cumulative Hazard Function\dataset.csv' /ENCODING='UTF8' /DE
      LCASE=LINE /DELIMITERS=', ' /QUALIFIER='"' /ARRANGEMENT=DELIMITED /
FIRSTCASE=2
212 0 M> GET DATA /TYPE=TXT /FILE='D:\DATA ANALYSIS\0 Survival Analysis\Cumulative Hazard Function\dataset.csv' /ENCODING='UTF8'
      /DELCASE=LINE /DELIMITERS=', ' /QUALIFIER='"' /ARRANGEMENT=DELIMITED /FIRSTCASE=2
213 0 /VARIABLES=school A8 sex A8 age F8.0 address A8 famsize A8 Pstatus A
8 Medu F8.0 Fedu F8.0 Mjob A16 Fjob A16 reason A16 guardian A16 traveltime F8.0 studytime F8.0 failures F8.0 schoolsup A
8 famsup A8 paid A8 activities A8 nursery A8 higher A8 internet A8 romantic A8 famrel F8.0 freetime F8.0 goout F8.0 Dalc
F8.0 Walc F8.0 health F8.0 absences F8.0 G1 F8.0 G2 F
      8.0 G3 F8.0.
213 0 M> /VARIABLES=school A8 sex A8 age F8.0 address A8 famsize A8 Pstatus A8 Medu F8.0 Fedu F8.0 Mjob A16 Fjob A16 reason A16
guardian A16 traveltime F8.0 studytime F8.0 failures F8.0 schoolsup A8 famsup A8 paid A8 activities A8 nursery A8 higher A8 internet A8 romantic A8 famrel F8.0 freetime F8.0 goout
F8.0 Dalc F8.0 Walc F8.0 health F8.0 absences F8.0 G1
      F8.0 G2 F8.0 G3 F8.0.
214 0 DATASET NAME CumulativeHazardFunctionData.
214 0 M> DATASET NAME CumulativeHazardFunctionData.
215 0 COMPUTE duration=absences+1.
215 0 M> COMPUTE duration=absences+1.
216 0 COMPUTE event=(G3<10).
216 0 M> COMPUTE event=(G3<10).
217 0 COMPUTE cause=0.
217 0 M> COMPUTE cause=0.
218 0 IF(G3>0 AND G3<10) cause=1.
218 0 M> IF(G3>0 AND G3<10) cause=1.
219 0 IF(G3=0) cause=2.
219 0 M> IF(G3=0) cause=2.
220 0 COMPUTE competing_event=(cause>0).
220 0 M> COMPUTE competing_event=(cause>0).
221 0 COMPUTE sex_male=(sex='M').
221 0 M> COMPUTE sex_male=(sex='M').

```

Cumulative Hazard Function

```
222 0 VARIABLE LABELS duration 'Demonstration duration: absences plus one'
event 'Academic failure event: G3 below ten' cause '0
      censored, 1 nonzero failure, 2 zero-grade competing event'.
222 0 M> VARIABLE LABELS duration 'Demonstration duration: absences plus on
e' event 'Academic failure event: G3 below ten' cause
      '0 censored, 1 nonzero failure, 2 zero-grade competing event'.
223 0 VALUE LABELS event 0 'Censored' 1 'Failure' /cause 0 'Censored' 1 'No
nzero failure' 2 'Zero grade'.
223 0 M> VALUE LABELS event 0 'Censored' 1 'Failure' /cause 0 'Censored' 1
'Nonzero failure' 2 'Zero grade'.
224 0 EXECUTE.
224 0 M> EXECUTE.
225 0 * BEGIN METHOD-SPECIFIC SPSS WORKFLOW.
225 0 M> * BEGIN METHOD-SPECIFIC SPSS WORKFLOW.
226 0 KM duration BY sex_male /STATUS=event(1) /PRINT TABLE MEAN /PLOT SURV
IVAL HAZARD.
226 0 M> KM duration BY sex_male /STATUS=event(1) /PRINT TABLE MEAN /PLOT S
URVIVAL HAZARD.
```

Kaplan-Meier

Cumulative Hazard Function

Notes

Output Created		18-JUL-2026 17:13:15
Comments		
Input	Data	D:\DATA ANALYSIS\O Survival Analysis\Cumulative Hazard Function\dataset. csv
	Active Dataset	CumulativeHazardFunctionData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the analysis.
Syntax		KM duration BY sex_male /STATUS=event(1) /PRINT TABLE MEAN /PLOT SURVIVAL ...
Resources	Processor Time	00:00:02.52
	Elapsed Time	00:00:01.27

[CumulativeHazardFunctionData]

Case Processing Summary

sex_male	Total N	N of Events	Censored	
			N	Percent
.00	383	50	333	86.9%
1.00	266	50	216	81.2%
Overall	649	100	549	84.6%

Cumulative Hazard Function

Survival Table

sex_male		Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
				Estimate	Std. Error	
.00	1	1.000	Failure	.	.	1
	2	1.000	Failure	.	.	2
	3	1.000	Failure	.	.	3
	4	1.000	Failure	.	.	4
	5	1.000	Failure	.	.	5
	6	1.000	Failure	.	.	6
	7	1.000	Failure	.	.	7
	8	1.000	Failure	.	.	8
	9	1.000	Failure	.	.	9
	10	1.000	Failure	.	.	10
	11	1.000	Failure	.	.	11
	12	1.000	Failure	.	.	12
	13	1.000	Failure	.	.	13
	14	1.000	Failure	.	.	14
	15	1.000	Failure	.	.	15
	16	1.000	Failure	.	.	16
	17	1.000	Failure	.	.	17
	18	1.000	Failure	.	.	18
	19	1.000	Failure	.950	.011	19
	20	1.000	Censored	.	.	19
	21	1.000	Censored	.	.	19
	22	1.000	Censored	.	.	19
	23	1.000	Censored	.	.	19
	24	1.000	Censored	.	.	19
	25	1.000	Censored	.	.	19
	26	1.000	Censored	.	.	19
	27	1.000	Censored	.	.	19
	28	1.000	Censored	.	.	19
	29	1.000	Censored	.	.	19
	30	1.000	Censored	.	.	19
	31	1.000	Censored	.	.	19

Cumulative Hazard Function

Survival Table

sex_male		N of Remaining Cases
.00	1	382
	2	381
	3	380
	4	379
	5	378
	6	377
	7	376
	8	375
	9	374
	10	373
	11	372
	12	371
	13	370
	14	369
	15	368
	16	367
	17	366
	18	365
	19	364
	20	363
	21	362
	22	361
	23	360
	24	359
	25	358
	26	357
	27	356
	28	355
	29	354
	30	353
	31	352

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
32	1.000	Censored	.	.	19
33	1.000	Censored	.	.	19
34	1.000	Censored	.	.	19
35	1.000	Censored	.	.	19
36	1.000	Censored	.	.	19
37	1.000	Censored	.	.	19
38	1.000	Censored	.	.	19
39	1.000	Censored	.	.	19
40	1.000	Censored	.	.	19
41	1.000	Censored	.	.	19
42	1.000	Censored	.	.	19
43	1.000	Censored	.	.	19
44	1.000	Censored	.	.	19
45	1.000	Censored	.	.	19
46	1.000	Censored	.	.	19
47	1.000	Censored	.	.	19
48	1.000	Censored	.	.	19
49	1.000	Censored	.	.	19
50	1.000	Censored	.	.	19
51	1.000	Censored	.	.	19
52	1.000	Censored	.	.	19
53	1.000	Censored	.	.	19
54	1.000	Censored	.	.	19
55	1.000	Censored	.	.	19
56	1.000	Censored	.	.	19
57	1.000	Censored	.	.	19
58	1.000	Censored	.	.	19
59	1.000	Censored	.	.	19
60	1.000	Censored	.	.	19
61	1.000	Censored	.	.	19
62	1.000	Censored	.	.	19

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
32	351
33	350
34	349
35	348
36	347
37	346
38	345
39	344
40	343
41	342
42	341
43	340
44	339
45	338
46	337
47	336
48	335
49	334
50	333
51	332
52	331
53	330
54	329
55	328
56	327
57	326
58	325
59	324
60	323
61	322
62	321

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
63	1.000	Censored	.	.	19
64	1.000	Censored	.	.	19
65	1.000	Censored	.	.	19
66	1.000	Censored	.	.	19
67	1.000	Censored	.	.	19
68	1.000	Censored	.	.	19
69	1.000	Censored	.	.	19
70	1.000	Censored	.	.	19
71	1.000	Censored	.	.	19
72	1.000	Censored	.	.	19
73	1.000	Censored	.	.	19
74	1.000	Censored	.	.	19
75	1.000	Censored	.	.	19
76	1.000	Censored	.	.	19
77	1.000	Censored	.	.	19
78	1.000	Censored	.	.	19
79	1.000	Censored	.	.	19
80	1.000	Censored	.	.	19
81	1.000	Censored	.	.	19
82	1.000	Censored	.	.	19
83	1.000	Censored	.	.	19
84	1.000	Censored	.	.	19
85	1.000	Censored	.	.	19
86	1.000	Censored	.	.	19
87	1.000	Censored	.	.	19
88	1.000	Censored	.	.	19
89	1.000	Censored	.	.	19
90	1.000	Censored	.	.	19
91	1.000	Censored	.	.	19
92	1.000	Censored	.	.	19
93	1.000	Censored	.	.	19

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
63	320
64	319
65	318
66	317
67	316
68	315
69	314
70	313
71	312
72	311
73	310
74	309
75	308
76	307
77	306
78	305
79	304
80	303
81	302
82	301
83	300
84	299
85	298
86	297
87	296
88	295
89	294
90	293
91	292
92	291
93	290

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
94	1.000	Censored	.	.	19
95	1.000	Censored	.	.	19
96	1.000	Censored	.	.	19
97	1.000	Censored	.	.	19
98	1.000	Censored	.	.	19
99	1.000	Censored	.	.	19
100	1.000	Censored	.	.	19
101	1.000	Censored	.	.	19
102	1.000	Censored	.	.	19
103	1.000	Censored	.	.	19
104	1.000	Censored	.	.	19
105	1.000	Censored	.	.	19
106	1.000	Censored	.	.	19
107	1.000	Censored	.	.	19
108	1.000	Censored	.	.	19
109	1.000	Censored	.	.	19
110	1.000	Censored	.	.	19
111	1.000	Censored	.	.	19
112	1.000	Censored	.	.	19
113	1.000	Censored	.	.	19
114	1.000	Censored	.	.	19
115	1.000	Censored	.	.	19
116	1.000	Censored	.	.	19
117	1.000	Censored	.	.	19
118	1.000	Censored	.	.	19
119	1.000	Censored	.	.	19
120	1.000	Censored	.	.	19
121	1.000	Censored	.	.	19
122	1.000	Censored	.	.	19
123	1.000	Censored	.	.	19
124	1.000	Censored	.	.	19

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
94	289
95	288
96	287
97	286
98	285
99	284
100	283
101	282
102	281
103	280
104	279
105	278
106	277
107	276
108	275
109	274
110	273
111	272
112	271
113	270
114	269
115	268
116	267
117	266
118	265
119	264
120	263
121	262
122	261
123	260
124	259

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
125	1.000	Censored	.	.	19
126	1.000	Censored	.	.	19
127	1.000	Censored	.	.	19
128	1.000	Censored	.	.	19
129	1.000	Censored	.	.	19
130	1.000	Censored	.	.	19
131	1.000	Censored	.	.	19
132	1.000	Censored	.	.	19
133	1.000	Censored	.	.	19
134	1.000	Censored	.	.	19
135	1.000	Censored	.	.	19
136	1.000	Censored	.	.	19
137	1.000	Censored	.	.	19
138	1.000	Censored	.	.	19
139	1.000	Censored	.	.	19
140	1.000	Censored	.	.	19
141	1.000	Censored	.	.	19
142	1.000	Censored	.	.	19
143	2.000	Censored	.	.	19
144	2.000	Censored	.	.	19
145	2.000	Censored	.	.	19
146	2.000	Censored	.	.	19
147	2.000	Censored	.	.	19
148	2.000	Censored	.	.	19
149	2.000	Censored	.	.	19
150	2.000	Censored	.	.	19
151	2.000	Censored	.	.	19
152	2.000	Censored	.	.	19
153	2.000	Censored	.	.	19
154	3.000	Failure	.	.	20
155	3.000	Failure	.	.	21

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
125	258
126	257
127	256
128	255
129	254
130	253
131	252
132	251
133	250
134	249
135	248
136	247
137	246
138	245
139	244
140	243
141	242
142	241
143	240
144	239
145	238
146	237
147	236
148	235
149	234
150	233
151	232
152	231
153	230
154	229
155	228

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
156	3.000	Failure	.	.	22
157	3.000	Failure	.	.	23
158	3.000	Failure	.	.	24
159	3.000	Failure	.926	.015	25
160	3.000	Censored	.	.	25
161	3.000	Censored	.	.	25
162	3.000	Censored	.	.	25
163	3.000	Censored	.	.	25
164	3.000	Censored	.	.	25
165	3.000	Censored	.	.	25
166	3.000	Censored	.	.	25
167	3.000	Censored	.	.	25
168	3.000	Censored	.	.	25
169	3.000	Censored	.	.	25
170	3.000	Censored	.	.	25
171	3.000	Censored	.	.	25
172	3.000	Censored	.	.	25
173	3.000	Censored	.	.	25
174	3.000	Censored	.	.	25
175	3.000	Censored	.	.	25
176	3.000	Censored	.	.	25
177	3.000	Censored	.	.	25
178	3.000	Censored	.	.	25
179	3.000	Censored	.	.	25
180	3.000	Censored	.	.	25
181	3.000	Censored	.	.	25
182	3.000	Censored	.	.	25
183	3.000	Censored	.	.	25
184	3.000	Censored	.	.	25
185	3.000	Censored	.	.	25
186	3.000	Censored	.	.	25

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
156	227
157	226
158	225
159	224
160	223
161	222
162	221
163	220
164	219
165	218
166	217
167	216
168	215
169	214
170	213
171	212
172	211
173	210
174	209
175	208
176	207
177	206
178	205
179	204
180	203
181	202
182	201
183	200
184	199
185	198
186	197

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
187	3.000	Censored	.	.	25
188	3.000	Censored	.	.	25
189	3.000	Censored	.	.	25
190	3.000	Censored	.	.	25
191	3.000	Censored	.	.	25
192	3.000	Censored	.	.	25
193	3.000	Censored	.	.	25
194	3.000	Censored	.	.	25
195	3.000	Censored	.	.	25
196	3.000	Censored	.	.	25
197	3.000	Censored	.	.	25
198	3.000	Censored	.	.	25
199	3.000	Censored	.	.	25
200	3.000	Censored	.	.	25
201	3.000	Censored	.	.	25
202	3.000	Censored	.	.	25
203	3.000	Censored	.	.	25
204	3.000	Censored	.	.	25
205	3.000	Censored	.	.	25
206	3.000	Censored	.	.	25
207	3.000	Censored	.	.	25
208	3.000	Censored	.	.	25
209	3.000	Censored	.	.	25
210	3.000	Censored	.	.	25
211	3.000	Censored	.	.	25
212	3.000	Censored	.	.	25
213	3.000	Censored	.	.	25
214	3.000	Censored	.	.	25
215	3.000	Censored	.	.	25
216	3.000	Censored	.	.	25
217	3.000	Censored	.	.	25

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
187	196
188	195
189	194
190	193
191	192
192	191
193	190
194	189
195	188
196	187
197	186
198	185
199	184
200	183
201	182
202	181
203	180
204	179
205	178
206	177
207	176
208	175
209	174
210	173
211	172
212	171
213	170
214	169
215	168
216	167
217	166

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
218	3.000	Censored	.	.	25
219	3.000	Censored	.	.	25
220	3.000	Censored	.	.	25
221	3.000	Censored	.	.	25
222	3.000	Censored	.	.	25
223	3.000	Censored	.	.	25
224	4.000	Failure	.	.	26
225	4.000	Failure	.	.	27
226	4.000	Failure	.908	.018	28
227	4.000	Censored	.	.	28
228	4.000	Censored	.	.	28
229	5.000	Failure	.	.	29
230	5.000	Failure	.	.	30
231	5.000	Failure	.	.	31
232	5.000	Failure	.	.	32
233	5.000	Failure	.879	.021	33
234	5.000	Censored	.	.	33
235	5.000	Censored	.	.	33
236	5.000	Censored	.	.	33
237	5.000	Censored	.	.	33
238	5.000	Censored	.	.	33
239	5.000	Censored	.	.	33
240	5.000	Censored	.	.	33
241	5.000	Censored	.	.	33
242	5.000	Censored	.	.	33
243	5.000	Censored	.	.	33
244	5.000	Censored	.	.	33
245	5.000	Censored	.	.	33
246	5.000	Censored	.	.	33
247	5.000	Censored	.	.	33
248	5.000	Censored	.	.	33

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
218	165
219	164
220	163
221	162
222	161
223	160
224	159
225	158
226	157
227	156
228	155
229	154
230	153
231	152
232	151
233	150
234	149
235	148
236	147
237	146
238	145
239	144
240	143
241	142
242	141
243	140
244	139
245	138
246	137
247	136
248	135

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
249	5.000	Censored	.	.	33
250	5.000	Censored	.	.	33
251	5.000	Censored	.	.	33
252	5.000	Censored	.	.	33
253	5.000	Censored	.	.	33
254	5.000	Censored	.	.	33
255	5.000	Censored	.	.	33
256	5.000	Censored	.	.	33
257	5.000	Censored	.	.	33
258	5.000	Censored	.	.	33
259	5.000	Censored	.	.	33
260	5.000	Censored	.	.	33
261	5.000	Censored	.	.	33
262	5.000	Censored	.	.	33
263	5.000	Censored	.	.	33
264	5.000	Censored	.	.	33
265	5.000	Censored	.	.	33
266	5.000	Censored	.	.	33
267	5.000	Censored	.	.	33
268	5.000	Censored	.	.	33
269	5.000	Censored	.	.	33
270	5.000	Censored	.	.	33
271	5.000	Censored	.	.	33
272	5.000	Censored	.	.	33
273	5.000	Censored	.	.	33
274	5.000	Censored	.	.	33
275	5.000	Censored	.	.	33
276	5.000	Censored	.	.	33
277	5.000	Censored	.	.	33
278	5.000	Censored	.	.	33
279	5.000	Censored	.	.	33

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
249	134
250	133
251	132
252	131
253	130
254	129
255	128
256	127
257	126
258	125
259	124
260	123
261	122
262	121
263	120
264	119
265	118
266	117
267	116
268	115
269	114
270	113
271	112
272	111
273	110
274	109
275	108
276	107
277	106
278	105
279	104

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
280	6.000	Failure	.	.	34
281	6.000	Failure	.862	.024	35
282	6.000	Censored	.	.	35
283	6.000	Censored	.	.	35
284	6.000	Censored	.	.	35
285	6.000	Censored	.	.	35
286	6.000	Censored	.	.	35
287	6.000	Censored	.	.	35
288	6.000	Censored	.	.	35
289	6.000	Censored	.	.	35
290	7.000	Failure	.	.	36
291	7.000	Failure	.	.	37
292	7.000	Failure	.	.	38
293	7.000	Failure	.825	.029	39
294	7.000	Censored	.	.	39
295	7.000	Censored	.	.	39
296	7.000	Censored	.	.	39
297	7.000	Censored	.	.	39
298	7.000	Censored	.	.	39
299	7.000	Censored	.	.	39
300	7.000	Censored	.	.	39
301	7.000	Censored	.	.	39
302	7.000	Censored	.	.	39
303	7.000	Censored	.	.	39
304	7.000	Censored	.	.	39
305	7.000	Censored	.	.	39
306	7.000	Censored	.	.	39
307	7.000	Censored	.	.	39
308	7.000	Censored	.	.	39
309	7.000	Censored	.	.	39
310	7.000	Censored	.	.	39

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
280	103
281	102
282	101
283	100
284	99
285	98
286	97
287	96
288	95
289	94
290	93
291	92
292	91
293	90
294	89
295	88
296	87
297	86
298	85
299	84
300	83
301	82
302	81
303	80
304	79
305	78
306	77
307	76
308	75
309	74
310	73

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
311	7.000	Censored	.	.	39
312	7.000	Censored	.	.	39
313	7.000	Censored	.	.	39
314	7.000	Censored	.	.	39
315	7.000	Censored	.	.	39
316	7.000	Censored	.	.	39
317	9.000	Failure	.	.	40
318	9.000	Failure	.801	.033	41
319	9.000	Censored	.	.	41
320	9.000	Censored	.	.	41
321	9.000	Censored	.	.	41
322	9.000	Censored	.	.	41
323	9.000	Censored	.	.	41
324	9.000	Censored	.	.	41
325	9.000	Censored	.	.	41
326	9.000	Censored	.	.	41
327	9.000	Censored	.	.	41
328	9.000	Censored	.	.	41
329	9.000	Censored	.	.	41
330	9.000	Censored	.	.	41
331	9.000	Censored	.	.	41
332	9.000	Censored	.	.	41
333	9.000	Censored	.	.	41
334	9.000	Censored	.	.	41
335	9.000	Censored	.	.	41
336	9.000	Censored	.	.	41
337	9.000	Censored	.	.	41
338	9.000	Censored	.	.	41
339	10.000	Failure	.	.	42
340	10.000	Failure	.765	.040	43
341	10.000	Censored	.	.	43

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
311	72
312	71
313	70
314	69
315	68
316	67
317	66
318	65
319	64
320	63
321	62
322	61
323	60
324	59
325	58
326	57
327	56
328	55
329	54
330	53
331	52
332	51
333	50
334	49
335	48
336	47
337	46
338	45
339	44
340	43
341	42

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
342	11.000	Failure	.	.	44
343	11.000	Failure	.729	.046	45
344	11.000	Censored	.	.	45
345	11.000	Censored	.	.	45
346	11.000	Censored	.	.	45
347	11.000	Censored	.	.	45
348	11.000	Censored	.	.	45
349	11.000	Censored	.	.	45
350	11.000	Censored	.	.	45
351	11.000	Censored	.	.	45
352	11.000	Censored	.	.	45
353	11.000	Censored	.	.	45
354	11.000	Censored	.	.	45
355	11.000	Censored	.	.	45
356	12.000	Censored	.	.	45
357	13.000	Failure	.702	.051	46
358	13.000	Censored	.	.	46
359	13.000	Censored	.	.	46
360	13.000	Censored	.	.	46
361	13.000	Censored	.	.	46
362	13.000	Censored	.	.	46
363	13.000	Censored	.	.	46
364	13.000	Censored	.	.	46
365	15.000	Failure	.	.	47
366	15.000	Failure	.	.	48
367	15.000	Failure	.591	.073	49
368	15.000	Censored	.	.	49
369	15.000	Censored	.	.	49
370	15.000	Censored	.	.	49
371	16.000	Censored	.	.	49
372	17.000	Censored	.	.	49

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
342	41
343	40
344	39
345	38
346	37
347	36
348	35
349	34
350	33
351	32
352	31
353	30
354	29
355	28
356	27
357	26
358	25
359	24
360	23
361	22
362	21
363	20
364	19
365	18
366	17
367	16
368	15
369	14
370	13
371	12
372	11

Cumulative Hazard Function

Survival Table

				Cumulative Proportion Surviving at the Time		
sex	male	Time	Status	Estimate	Std. Error	N of Cumulative Events
	373	17.000	Censored	.	.	49
	374	17.000	Censored	.	.	49
	375	17.000	Censored	.	.	49
	376	17.000	Censored	.	.	49
	377	17.000	Censored	.	.	49
	378	19.000	Censored	.	.	49
	379	19.000	Censored	.	.	49
	380	22.000	Censored	.	.	49
	381	25.000	Failure	.394	.168	50
	382	31.000	Censored	.	.	50
	383	33.000	Censored	.	.	50
1.00	1	1.000	Failure	.	.	1
	2	1.000	Failure	.	.	2
	3	1.000	Failure	.	.	3
	4	1.000	Failure	.	.	4
	5	1.000	Failure	.	.	5
	6	1.000	Failure	.	.	6
	7	1.000	Failure	.	.	7
	8	1.000	Failure	.	.	8
	9	1.000	Failure	.	.	9
	10	1.000	Failure	.	.	10
	11	1.000	Failure	.	.	11
	12	1.000	Failure	.	.	12
	13	1.000	Failure	.	.	13
	14	1.000	Failure	.	.	14
	15	1.000	Failure	.944	.014	15
	16	1.000	Censored	.	.	15
	17	1.000	Censored	.	.	15
	18	1.000	Censored	.	.	15
	19	1.000	Censored	.	.	15
	20	1.000	Censored	.	.	15

Cumulative Hazard Function

Survival Table

sex_male		N of Remaining Cases
	373	10
	374	9
	375	8
	376	7
	377	6
	378	5
	379	4
	380	3
	381	2
	382	1
	383	0
1.00	1	265
	2	264
	3	263
	4	262
	5	261
	6	260
	7	259
	8	258
	9	257
	10	256
	11	255
	12	254
	13	253
	14	252
	15	251
	16	250
	17	249
	18	248
	19	247
	20	246

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
21	1.000	Censored	.	.	15
22	1.000	Censored	.	.	15
23	1.000	Censored	.	.	15
24	1.000	Censored	.	.	15
25	1.000	Censored	.	.	15
26	1.000	Censored	.	.	15
27	1.000	Censored	.	.	15
28	1.000	Censored	.	.	15
29	1.000	Censored	.	.	15
30	1.000	Censored	.	.	15
31	1.000	Censored	.	.	15
32	1.000	Censored	.	.	15
33	1.000	Censored	.	.	15
34	1.000	Censored	.	.	15
35	1.000	Censored	.	.	15
36	1.000	Censored	.	.	15
37	1.000	Censored	.	.	15
38	1.000	Censored	.	.	15
39	1.000	Censored	.	.	15
40	1.000	Censored	.	.	15
41	1.000	Censored	.	.	15
42	1.000	Censored	.	.	15
43	1.000	Censored	.	.	15
44	1.000	Censored	.	.	15
45	1.000	Censored	.	.	15
46	1.000	Censored	.	.	15
47	1.000	Censored	.	.	15
48	1.000	Censored	.	.	15
49	1.000	Censored	.	.	15
50	1.000	Censored	.	.	15
51	1.000	Censored	.	.	15

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
21	245
22	244
23	243
24	242
25	241
26	240
27	239
28	238
29	237
30	236
31	235
32	234
33	233
34	232
35	231
36	230
37	229
38	228
39	227
40	226
41	225
42	224
43	223
44	222
45	221
46	220
47	219
48	218
49	217
50	216
51	215

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
52	1.000	Censored	.	.	15
53	1.000	Censored	.	.	15
54	1.000	Censored	.	.	15
55	1.000	Censored	.	.	15
56	1.000	Censored	.	.	15
57	1.000	Censored	.	.	15
58	1.000	Censored	.	.	15
59	1.000	Censored	.	.	15
60	1.000	Censored	.	.	15
61	1.000	Censored	.	.	15
62	1.000	Censored	.	.	15
63	1.000	Censored	.	.	15
64	1.000	Censored	.	.	15
65	1.000	Censored	.	.	15
66	1.000	Censored	.	.	15
67	1.000	Censored	.	.	15
68	1.000	Censored	.	.	15
69	1.000	Censored	.	.	15
70	1.000	Censored	.	.	15
71	1.000	Censored	.	.	15
72	1.000	Censored	.	.	15
73	1.000	Censored	.	.	15
74	1.000	Censored	.	.	15
75	1.000	Censored	.	.	15
76	1.000	Censored	.	.	15
77	1.000	Censored	.	.	15
78	1.000	Censored	.	.	15
79	1.000	Censored	.	.	15
80	1.000	Censored	.	.	15
81	1.000	Censored	.	.	15
82	1.000	Censored	.	.	15

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
52	214
53	213
54	212
55	211
56	210
57	209
58	208
59	207
60	206
61	205
62	204
63	203
64	202
65	201
66	200
67	199
68	198
69	197
70	196
71	195
72	194
73	193
74	192
75	191
76	190
77	189
78	188
79	187
80	186
81	185
82	184

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
83	1.000	Censored	.	.	15
84	1.000	Censored	.	.	15
85	1.000	Censored	.	.	15
86	1.000	Censored	.	.	15
87	1.000	Censored	.	.	15
88	1.000	Censored	.	.	15
89	1.000	Censored	.	.	15
90	1.000	Censored	.	.	15
91	1.000	Censored	.	.	15
92	1.000	Censored	.	.	15
93	1.000	Censored	.	.	15
94	1.000	Censored	.	.	15
95	1.000	Censored	.	.	15
96	1.000	Censored	.	.	15
97	1.000	Censored	.	.	15
98	1.000	Censored	.	.	15
99	1.000	Censored	.	.	15
100	1.000	Censored	.	.	15
101	1.000	Censored	.	.	15
102	1.000	Censored	.	.	15
103	2.000	Censored	.	.	15
104	3.000	Failure	.	.	16
105	3.000	Failure	.	.	17
106	3.000	Failure	.	.	18
107	3.000	Failure	.	.	19
108	3.000	Failure	.	.	20
109	3.000	Failure	.	.	21
110	3.000	Failure	.	.	22
111	3.000	Failure	.	.	23
112	3.000	Failure	.	.	24
113	3.000	Failure	.886	.022	25

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
83	183
84	182
85	181
86	180
87	179
88	178
89	177
90	176
91	175
92	174
93	173
94	172
95	171
96	170
97	169
98	168
99	167
100	166
101	165
102	164
103	163
104	162
105	161
106	160
107	159
108	158
109	157
110	156
111	155
112	154
113	153

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
114	3.000	Censored	.	.	25
115	3.000	Censored	.	.	25
116	3.000	Censored	.	.	25
117	3.000	Censored	.	.	25
118	3.000	Censored	.	.	25
119	3.000	Censored	.	.	25
120	3.000	Censored	.	.	25
121	3.000	Censored	.	.	25
122	3.000	Censored	.	.	25
123	3.000	Censored	.	.	25
124	3.000	Censored	.	.	25
125	3.000	Censored	.	.	25
126	3.000	Censored	.	.	25
127	3.000	Censored	.	.	25
128	3.000	Censored	.	.	25
129	3.000	Censored	.	.	25
130	3.000	Censored	.	.	25
131	3.000	Censored	.	.	25
132	3.000	Censored	.	.	25
133	3.000	Censored	.	.	25
134	3.000	Censored	.	.	25
135	3.000	Censored	.	.	25
136	3.000	Censored	.	.	25
137	3.000	Censored	.	.	25
138	3.000	Censored	.	.	25
139	3.000	Censored	.	.	25
140	3.000	Censored	.	.	25
141	3.000	Censored	.	.	25
142	3.000	Censored	.	.	25
143	3.000	Censored	.	.	25
144	4.000	Censored	.	.	25

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
114	152
115	151
116	150
117	149
118	148
119	147
120	146
121	145
122	144
123	143
124	142
125	141
126	140
127	139
128	138
129	137
130	136
131	135
132	134
133	133
134	132
135	131
136	130
137	129
138	128
139	127
140	126
141	125
142	124
143	123
144	122

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
145	4.000	Censored	.	.	25
146	5.000	Failure	.	.	26
147	5.000	Failure	.	.	27
148	5.000	Failure	.	.	28
149	5.000	Failure	.	.	29
150	5.000	Failure	.	.	30
151	5.000	Failure	.842	.027	31
152	5.000	Censored	.	.	31
153	5.000	Censored	.	.	31
154	5.000	Censored	.	.	31
155	5.000	Censored	.	.	31
156	5.000	Censored	.	.	31
157	5.000	Censored	.	.	31
158	5.000	Censored	.	.	31
159	5.000	Censored	.	.	31
160	5.000	Censored	.	.	31
161	5.000	Censored	.	.	31
162	5.000	Censored	.	.	31
163	5.000	Censored	.	.	31
164	5.000	Censored	.	.	31
165	5.000	Censored	.	.	31
166	5.000	Censored	.	.	31
167	5.000	Censored	.	.	31
168	5.000	Censored	.	.	31
169	5.000	Censored	.	.	31
170	5.000	Censored	.	.	31
171	5.000	Censored	.	.	31
172	5.000	Censored	.	.	31
173	5.000	Censored	.	.	31
174	5.000	Censored	.	.	31
175	5.000	Censored	.	.	31

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
145	121
146	120
147	119
148	118
149	117
150	116
151	115
152	114
153	113
154	112
155	111
156	110
157	109
158	108
159	107
160	106
161	105
162	104
163	103
164	102
165	101
166	100
167	99
168	98
169	97
170	96
171	95
172	94
173	93
174	92
175	91

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
176	5.000	Censored	.	.	31
177	5.000	Censored	.	.	31
178	5.000	Censored	.	.	31
179	5.000	Censored	.	.	31
180	5.000	Censored	.	.	31
181	5.000	Censored	.	.	31
182	5.000	Censored	.	.	31
183	5.000	Censored	.	.	31
184	5.000	Censored	.	.	31
185	5.000	Censored	.	.	31
186	5.000	Censored	.	.	31
187	5.000	Censored	.	.	31
188	6.000	Censored	.	.	31
189	6.000	Censored	.	.	31
190	7.000	Failure	.	.	32
191	7.000	Failure	.820	.031	33
192	7.000	Censored	.	.	33
193	7.000	Censored	.	.	33
194	7.000	Censored	.	.	33
195	7.000	Censored	.	.	33
196	7.000	Censored	.	.	33
197	7.000	Censored	.	.	33
198	7.000	Censored	.	.	33
199	7.000	Censored	.	.	33
200	7.000	Censored	.	.	33
201	7.000	Censored	.	.	33
202	7.000	Censored	.	.	33
203	7.000	Censored	.	.	33
204	7.000	Censored	.	.	33
205	7.000	Censored	.	.	33
206	7.000	Censored	.	.	33

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
176	90
177	89
178	88
179	87
180	86
181	85
182	84
183	83
184	82
185	81
186	80
187	79
188	78
189	77
190	76
191	75
192	74
193	73
194	72
195	71
196	70
197	69
198	68
199	67
200	66
201	65
202	64
203	63
204	62
205	61
206	60

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
207	7.000	Censored	.	.	33
208	7.000	Censored	.	.	33
209	7.000	Censored	.	.	33
210	7.000	Censored	.	.	33
211	7.000	Censored	.	.	33
212	8.000	Failure	.805	.034	34
213	8.000	Censored	.	.	34
214	8.000	Censored	.	.	34
215	9.000	Failure	.	.	35
216	9.000	Failure	.	.	36
217	9.000	Failure	.	.	37
218	9.000	Failure	.	.	38
219	9.000	Failure	.	.	39
220	9.000	Failure	.	.	40
221	9.000	Failure	.697	.048	41
222	9.000	Censored	.	.	41
223	9.000	Censored	.	.	41
224	9.000	Censored	.	.	41
225	9.000	Censored	.	.	41
226	9.000	Censored	.	.	41
227	9.000	Censored	.	.	41
228	9.000	Censored	.	.	41
229	9.000	Censored	.	.	41
230	9.000	Censored	.	.	41
231	9.000	Censored	.	.	41
232	9.000	Censored	.	.	41
233	9.000	Censored	.	.	41
234	9.000	Censored	.	.	41
235	10.000	Failure	.675	.051	42
236	10.000	Censored	.	.	42
237	10.000	Censored	.	.	42

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
207	59
208	58
209	57
210	56
211	55
212	54
213	53
214	52
215	51
216	50
217	49
218	48
219	47
220	46
221	45
222	44
223	43
224	42
225	41
226	40
227	39
228	38
229	37
230	36
231	35
232	34
233	33
234	32
235	31
236	30
237	29

Cumulative Hazard Function

Survival Table

sex_male	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events
			Estimate	Std. Error	
238	10.000	Censored	.	.	42
239	11.000	Failure	.651	.055	43
240	11.000	Censored	.	.	43
241	11.000	Censored	.	.	43
242	11.000	Censored	.	.	43
243	11.000	Censored	.	.	43
244	11.000	Censored	.	.	43
245	11.000	Censored	.	.	43
246	12.000	Censored	.	.	43
247	12.000	Censored	.	.	43
248	12.000	Censored	.	.	43
249	12.000	Censored	.	.	43
250	13.000	Failure	.	.	44
251	13.000	Failure	.	.	45
252	13.000	Failure	.536	.075	46
253	13.000	Censored	.	.	46
254	14.000	Censored	.	.	46
255	15.000	Censored	.	.	46
256	15.000	Censored	.	.	46
257	16.000	Censored	.	.	46
258	17.000	Failure	.	.	47
259	17.000	Failure	.417	.095	48
260	17.000	Censored	.	.	48
261	17.000	Censored	.	.	48
262	19.000	Censored	.	.	48
263	22.000	Censored	.	.	48
264	23.000	Failure	.278	.130	49
265	23.000	Censored	.	.	49
266	27.000	Failure	.000	.000	50

Cumulative Hazard Function

Survival Table

sex_male	N of Remaining Cases
238	28
239	27
240	26
241	25
242	24
243	23
244	22
245	21
246	20
247	19
248	18
249	17
250	16
251	15
252	14
253	13
254	12
255	11
256	10
257	9
258	8
259	7
260	6
261	5
262	4
263	3
264	2
265	1
266	0

Cumulative Hazard Function

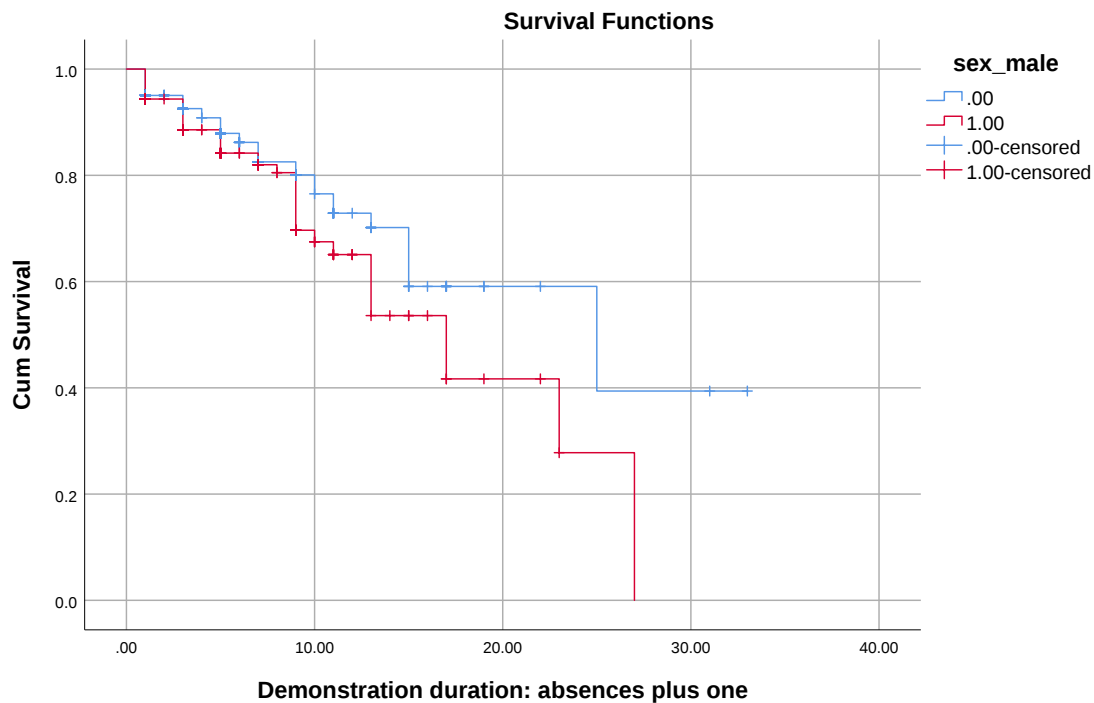
Means and Medians for Survival Time

sex_male	Estimate	Std. Error	Mean ^a		Median	
			95% Confidence Interval		Estimate	Std. Error
			Lower Bound	Upper Bound		
.00	21.614	1.843	18.002	25.225	25.000	8.530
1.00	16.397	1.288	13.872	18.922	17.000	2.424
Overall	19.234	1.308	16.672	21.797	23.000	5.295

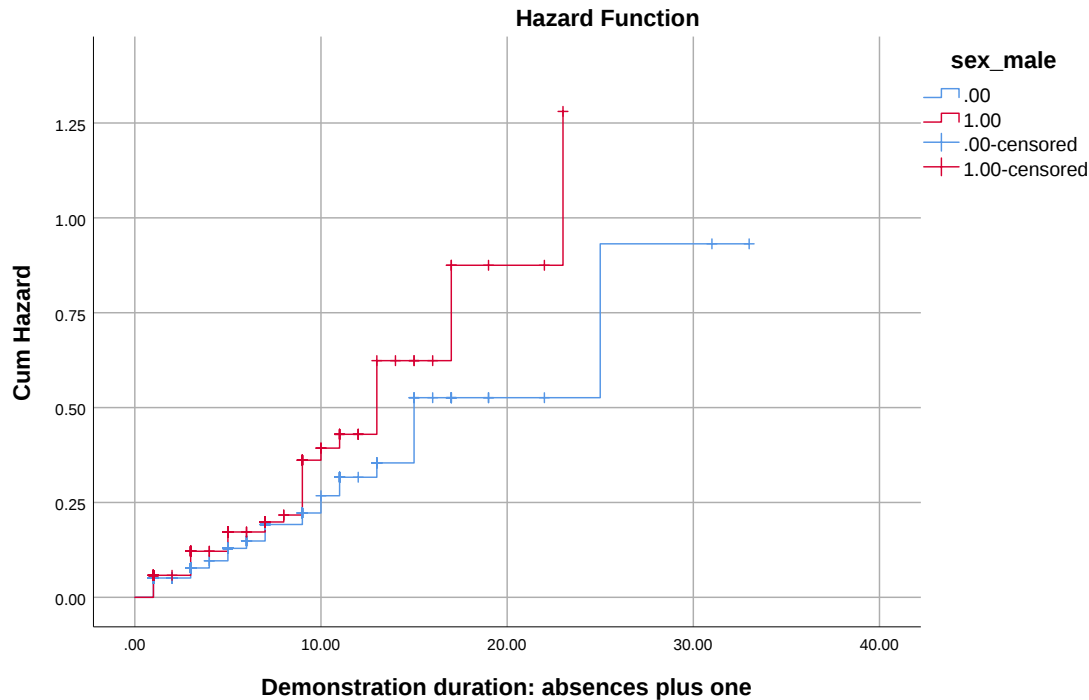
Means and Medians for Survival Time

sex_male	Median	
	95% Confidence Interval	
	Lower Bound	Upper Bound
.00	8.282	41.718
1.00	12.249	21.751
Overall	12.621	33.379

a. Estimation is limited to the largest survival time if it is censored.



Cumulative Hazard Function



227 0 ECHO 'The HAZARD plot is cumulative hazard; verified Nelson-Aalen increments are d divided by risk set size'.

227 0 M> ECHO 'The HAZARD plot is cumulative hazard; verified Nelson-Aalen increments are d divided by risk set size'.

The HAZARD plot is cumulative hazard; verified Nelson-Aalen increments are d divided by risk set size

228 0 * END METHOD-SPECIFIC SPSS WORKFLOW.

228 0 M> * END METHOD-SPECIFIC SPSS WORKFLOW.

229 0 SAVE OUTFILE='D:\DATA ANALYSIS\0 Survival Analysis\Cumulative Hazard Function\SPSS_Output\sav\cumulative-hazard-function_spss_ready_data.sav' /COMPRESSED.

229 0 M> SAVE OUTFILE='D:\DATA ANALYSIS\0 Survival Analysis\Cumulative Hazard Function\SPSS_Output\sav\cumulative-hazard-function_spss_ready_data.sav' /COMPRESSED.

230 0 ECHO 'Cumulative Hazard Function'.

230 0 M> ECHO 'Cumulative Hazard Function'.

Cumulative Hazard Function

231 0 ECHO 'Method type: cumulative_hazard_estimation'.

231 0 M> ECHO 'Method type: cumulative_hazard_estimation'.

Method type: cumulative_hazard_estimation

Cumulative Hazard Function

```
232 0 ECHO 'Design: Overall Nelson-Aalen cumulative hazard compared with the Kaplan-Meier transform -log(S).'.
232 0 M> ECHO 'Design: Overall Nelson-Aalen cumulative hazard compared with the Kaplan-Meier transform -log(S).'.
Design: Overall Nelson-Aalen cumulative hazard compared with the Kaplan-Meier transform -log(S).
233 0 ECHO 'Formula: H_NA(t)=sum[d_i/Y_i]; H_KM(t)=-log(S_KM(t))'.
233 0 M> ECHO 'Formula: H_NA(t)=sum[d_i/Y_i]; H_KM(t)=-log(S_KM(t))'.
Formula: H_NA(t)=sum[d_i/Y_i]; H_KM(t)=-log(S_KM(t))
234 0 ECHO 'Duration encoding: absences plus one'.
234 0 M> ECHO 'Duration encoding: absences plus one'.
Duration encoding: absences plus one
235 0 ECHO 'Event encoding: G3 below ten'.
235 0 M> ECHO 'Event encoding: G3 below ten'.
Event encoding: G3 below ten
236 0 ECHO 'Competing event: G3 equals zero where applicable'.
236 0 M> ECHO 'Competing event: G3 equals zero where applicable'.
Competing event: G3 equals zero where applicable
237 0 ECHO 'events = 100'.
237 0 M> ECHO 'events = 100'.
events = 100
238 0 ECHO 'final_nelson_aalen_hazard = 1.3881397530203088'.
238 0 M> ECHO 'final_nelson_aalen_hazard = 1.3881397530203088'.
final_nelson_aalen_hazard = 1.3881397530203088
239 0 ECHO 'final_minus_log_km = 1.5364720594900982'.
239 0 M> ECHO 'final_minus_log_km = 1.5364720594900982'.
final_minus_log_km = 1.5364720594900982
240 0 ECHO 'final_difference = -0.14833230646978945'.
240 0 M> ECHO 'final_difference = -0.14833230646978945'.
final_difference = -0.14833230646978945
241 0 ECHO 'maximum_absolute_difference = 0.14833230646978945'.
241 0 M> ECHO 'maximum_absolute_difference = 0.14833230646978945'.
maximum_absolute_difference = 0.14833230646978945
242 0 ECHO 'Cross-check status: pass'.
242 0 M> ECHO 'Cross-check status: pass'.
Cross-check status: pass
243 0 OUTPUT SAVE OUTFILE='D:\DATA ANALYSIS\0 Survival Analysis\Cumulative Hazard Function\SPSS_Output\spv\cumulative-hazard-function_spss_output.spv'.
```

Cumulative Hazard Function

```
243 0 M> OUTPUT SAVE OUTFILE='D:\DATA ANALYSIS\0 Survival Analysis\Cumulative Hazard Function\SPSS_Output\spv\cumulative-hazard-function_spss_output.spv'.
```

```
244 0 OUTPUT EXPORT /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=PRINTSETTING /PDF DOCUMENTFILE='D:\DATA ANALYSIS\0 Survival Analysis\Cumulative Hazard Function\SPSS_Output\pdf\cumulative-hazard-function_spss_output.pdf'.
```

```
244 0 M> OUTPUT EXPORT /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=PRINTSETTING /PDF DOCUMENTFILE='D:\DATA ANALYSIS\0 Survival Analysis\Cumulative Hazard Function\SPSS_Output\pdf\cumulative-hazard-function_spss_output.pdf'.
```