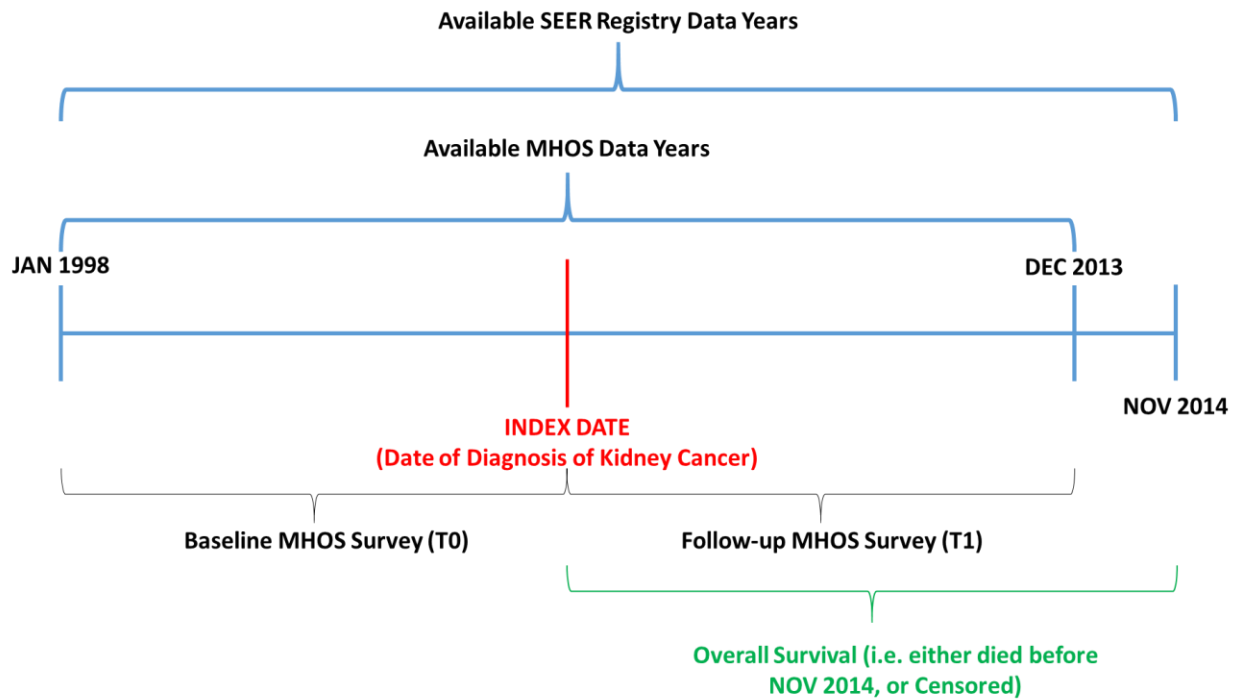
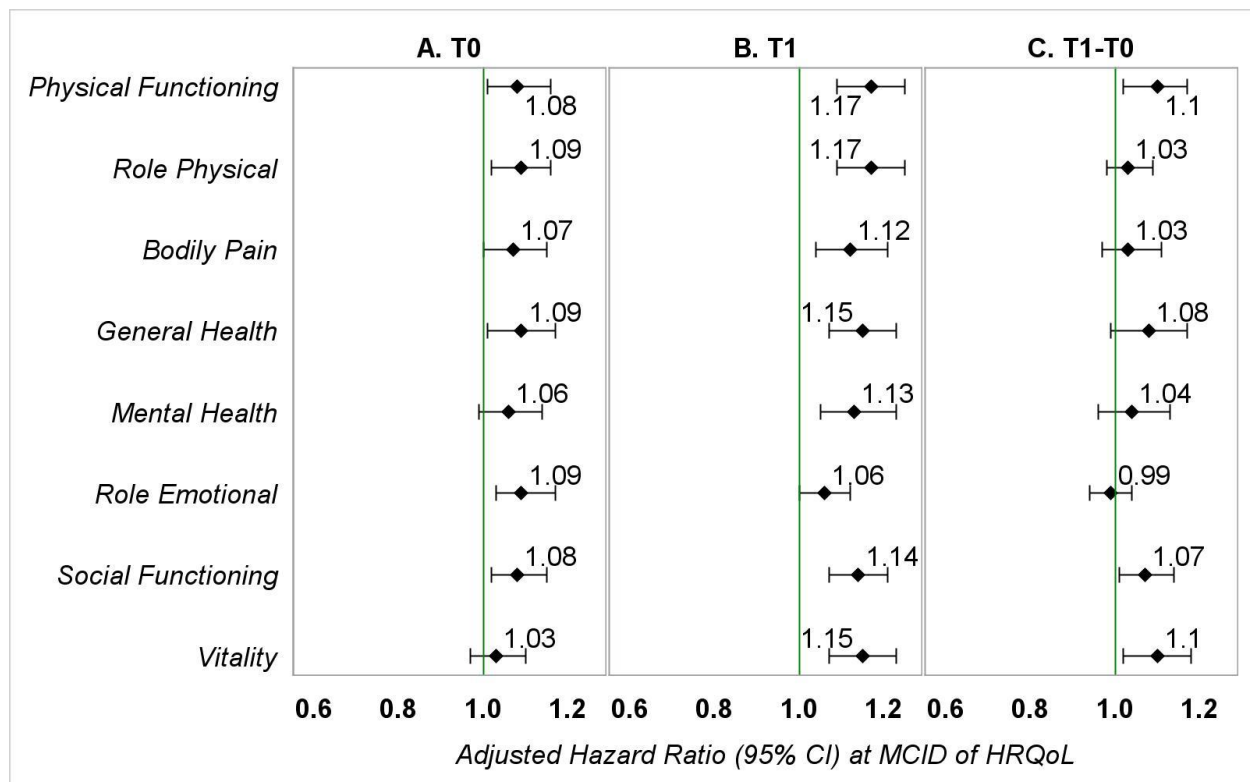


## Supplementary Material



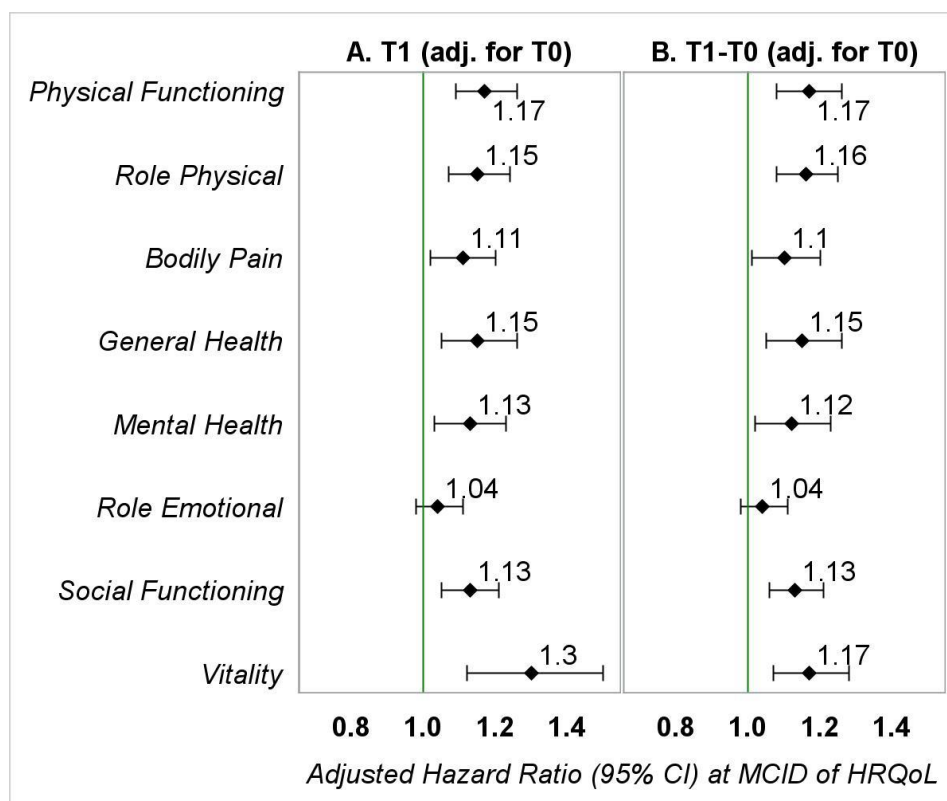
**Supplementary Figure S1. Graphical Representation of Study Design**



**Supplementary Figure S2. Adjusted Hazard Ratios (95% CI) Representing the Association between HRQoL Scales (at MCID) and OS in Patients with Kidney Cancer – Main Analyses**

### Legend

- Hazard ratios represent the association between *baseline HRQoL scales (3-point reduction) and overall survival* adjusted for gender, race, education (T0), marital status (T0), annual household income (T0), smoking status (T0), geographic region, number of comorbid conditions (T0), age at diagnosis, stage of kidney cancer (KC) at diagnosis, tumor grade, treatment type, and months between the T0 Survey and KC diagnosis.
- Hazard ratios represent the association between *follow-up HRQoL scales (3-point reduction) and overall survival* adjusted for gender, race, education (T1), marital status (T1), annual household income (T1), smoking status (T1), geographic region, number of comorbid conditions (T1), age at diagnosis, stage of kidney cancer (KC) at diagnosis, tumor grade, treatment type, and months between diagnosis of KC and the T1 Survey.
- Hazard ratios represent the association between *change in HRQoL scales (3-point reduction) from baseline to follow-up and overall survival* adjusted for gender, race, education (T1), marital status (T1), annual household income (T1), smoking status (T1), geographic region, number of comorbid conditions (T1), age at diagnosis, stage of kidney cancer (KC) at diagnosis, tumor grade, treatment type, months between the T0 Survey and KC diagnosis, and months between diagnosis of KC and the T1 Survey.



**Supplementary Figure S3. Adjusted Hazard Ratios (95% CI) Representing the Association between HRQoL Scales (at MCID) and OS in Patients with Kidney Cancer**

**– Sensitivity Analyses I**

**Legend**

- A. Hazard ratios represent the association between *follow-up HRQoL scales (3-point reduction) and overall survival* adjusted for gender, race, education (T1), marital status (T1), annual household income (T1), smoking status (T1), geographic region, number of comorbid conditions (T1), age at diagnosis, stage of kidney cancer (KC) at diagnosis, tumor grade, treatment type, months between diagnosis of KC and the T1 Survey, and baseline HRQoL.
- B. Hazard ratios represent the association between *change in HRQoL scales (3-point reduction) from baseline to follow-up and overall survival* adjusted for gender, race, education (T1), marital status (T1), annual household income (T1), smoking status (T1), geographic region, number of comorbid conditions (T1), age at diagnosis, stage of kidney cancer (KC) at diagnosis, tumor grade, treatment type, months between the T0 Survey and KC diagnosis, months between diagnosis of KC and the T1 Survey, and baseline HRQoL.

**Supplementary Table S1. Health-related Quality of Life of Kidney Cancer Patients**

HRQoL	Total (N=188), mean $\pm$ SD	Group, mean $\pm$ SD		P-value
		Survived (n=99, 52.7%)	Died (n=89, 47.3%)	
<b>Baseline (T0)</b>				
Health Utility (SF6D/VR6D)	0.70 $\pm$ 0.13	0.71 $\pm$ 0.13	0.69 $\pm$ 0.13	0.227
Physical Component Summary	38.2 $\pm$ 12.2	39.3 $\pm$ 12.7	36.9 $\pm$ 11.5	0.179
Mental Component Summary	52.9 $\pm$ 10.4	54.8 $\pm$ 9.0	50.8 $\pm$ 11.4	0.009
<i>Physical Functioning</i>	39.0 $\pm$ 13.1	39.9 $\pm$ 13.6	38.0 $\pm$ 12.4	0.323
<i>Role-physical</i>	41.2 $\pm$ 12.7	42.6 $\pm$ 12.9	39.7 $\pm$ 12.5	0.120
<i>Bodily Pain</i>	42.3 $\pm$ 11.8	43.5 $\pm$ 11.2	40.9 $\pm$ 12.4	0.136
<i>General Health</i>	44.5 $\pm$ 11.0	45.6 $\pm$ 10.8	43.2 $\pm$ 11.2	0.136
<i>Mental Health</i>	51.4 $\pm$ 10.5	52.4 $\pm$ 10.4	50.3 $\pm$ 10.5	0.177
<i>Role-emotional</i>	49.2 $\pm$ 11.2	51.1 $\pm$ 9.6	47.1 $\pm$ 12.5	0.017
<i>Social Functioning</i>	47.1 $\pm$ 12.5	49.4 $\pm$ 11.9	44.7 $\pm$ 12.7	0.009
<i>Vitality</i>	42.3 $\pm$ 10.9	48.7 $\pm$ 10.9	45.7 $\pm$ 10.7	0.056
<b>Follow-up (T1)</b>				
Health Utility (SF6D/VR6D)	0.65 $\pm$ 0.12	0.69 $\pm$ 0.12	0.62 $\pm$ 0.12	<0.001
Physical Component Summary	34.0 $\pm$ 12.0	36.9 $\pm$ 12.1	30.7 $\pm$ 11.2	<0.001
Mental Component Summary	50.6 $\pm$ 11.6	53.1 $\pm$ 10.6	47.8 $\pm$ 12.1	0.002
<i>Physical Functioning</i>	34.5 $\pm$ 13.7	36.6 $\pm$ 14.1	32.1 $\pm$ 12.8	0.024
<i>Role-physical</i>	38.1 $\pm$ 12.4	41.9 $\pm$ 12.6	33.9 $\pm$ 10.8	<0.001
<i>Bodily Pain</i>	40.6 $\pm$ 11.8	42.4 $\pm$ 11.3	38.5 $\pm$ 12.0	0.025
<i>General Health</i>	39.1 $\pm$ 11.3	41.8 $\pm$ 10.9	36.1 $\pm$ 11.0	<0.001
<i>Mental Health</i>	49.3 $\pm$ 10.9	51.3 $\pm$ 10.7	47.1 $\pm$ 10.7	0.009
<i>Role-emotional</i>	45.8 $\pm$ 13.1	48.1 $\pm$ 11.9	43.2 $\pm$ 13.9	0.012
<i>Social Functioning</i>	43.2 $\pm$ 13.6	47.0 $\pm$ 12.5	39.0 $\pm$ 13.7	<0.001
<i>Vitality</i>	43.2 $\pm$ 11.4	45.9 $\pm$ 10.8	40.2 $\pm$ 11.3	<0.001
<b>Change from T0 to T1</b>				

Health Utility (SF6D/VR6D)	-0.05 ± 0.11	-0.03 ± 0.11	-0.07 ± 0.11	0.023
Physical Component Summary	-4.1 ± 11.0	-2.4 ± 11.4	-6.1 ± 10.2	0.023
Mental Component Summary	-2.4 ± 11.8	-1.7 ± 11.7	-3.1 ± 12.0	0.450
<i>Physical Functioning</i>	-4.6 ± 12.7	-3.3 ± 12.3	-6.0 ± 13.1	0.157
<i>Role-physical</i>	-2.9 ± 13.7	-0.5 ± 13.2	-5.6 ± 13.8	0.011
<i>Bodily Pain</i>	-1.6 ± 11.0	-0.9 ± 11.5	-2.3 ± 10.4	0.387
<i>General Health</i>	-5.0 ± 10.5	-3.3 ± 9.5	-6.9 ± 11.3	0.024
<i>Mental Health</i>	-2.1 ± 11.5	-1.2 ± 11.3	-3.0 ± 11.8	0.275
<i>Role-emotional</i>	-3.4 ± 14.9	-3.0 ± 14.1	-3.9 ± 15.8	0.670
<i>Social Functioning</i>	-3.9 ± 12.9	-2.5 ± 12.6	-5.5 ± 13.2	0.107
<i>Vitality</i>	-3.9 ± 10.8	-2.8 ± 11.6	-5.1 ± 9.9	0.152

**Supplementary Table S2. Adjusted Hazard Ratios (95% CI) Representing the Association between HRQoL (at MCID) and OS**  
**in Patients with Kidney Cancer – Sensitivity Analyses II/III**

Measures of HRQoL	T0 Cohort (N=1,055) <i>SA-II</i>	T1 Cohort (N=966) <i>SA-III</i>
Health Utility (SF6D/VR6D)	1.02 (1.00, 1.05)	1.10 (1.07, 1.13)
Physical Component Summary	1.04 (1.01, 1.06)	1.10 (1.07, 1.13)
Mental Component Summary	1.01 (0.99, 1.04)	1.07 (1.04, 1.09)
<i>Physical Functioning</i>	1.01 (0.99, 1.03)	1.08 (1.06, 1.11)
<i>Role-physical</i>	1.02 (1.00, 1.04)	1.08 (1.05, 1.10)
<i>Bodily Pain</i>	1.02 (0.99, 1.04)	1.05 (1.02, 1.08)
<i>General Health</i>	1.03 (1.00, 1.05)	1.08 (1.06, 1.11)
<i>Mental Health</i>	1.01 (0.98, 1.03)	1.05 (1.03, 1.08)
<i>Role-emotional</i>	1.00 (0.98, 1.02)	1.05 (1.02, 1.07)
<i>Social Functioning</i>	1.03 (1.01, 1.06)	1.09 (1.07, 1.12)
<i>Vitality</i>	1.01 (0.99, 1.04)	1.09 (1.06, 1.12)

Point estimates highlighted in grey indicate deviation from the respective estimates in the main analyses in regards to statistical significance