

Supplement-Table S1 Full Results of multivariable Cox-regression for all-cause mortality according to diagnosis

		C18 Colon			C20 Rectum		
		HR	Lower 95%-CI	Upper 95%-CI	HR	Lower 95%-CI	Upper 95%-CI
Treatment in center	no	1.000			1.000		
	yes	0.921	0.887	0.956	0.978	0.929	1.029
Sex	male	1.000			1.000		
	female	0.919	0.885	0.954	0.966	0.916	1.018
Age at diagnosis	18- 49	1.000			1.000		
	50-59	1.349	1.198	1.520	1.174	1.016	1.356
	60-69	1.627	1.457	1.818	1.523	1.329	1.746
	70-79	2.496	2.245	2.776	2.505	2.195	2.860
	80+	5.258	4.726	5.851	4.429	3.864	5.076
Year of diagnosis	2009-2011	1.000			1.000		
	2012-2014	1.022	0.979	1.066	1.031	0.974	1.091
	2015-2017	1.133	1.074	1.196	0.997	0.923	1.076
UICC stage	I	1.000			1.000		
	II	1.230	1.142	1.325	1.540	1.384	1.714
	III	1.456	1.347	1.574	1.431	1.297	1.580
	IV	4.724	4.394	5.078	4.361	3.948	4.816
	X/n.s.	1.996	1.838	2.167	2.178	1.946	2.438
Grade	G1	1.000			1.000		
	G2	1.086	0.986	1.197	1.276	1.108	1.470
	G3/4	1.419	1.283	1.570	1.723	1.485	2.000
	GX/n.s.	1.088	0.973	1.218	1.105	0.946	1.290
Lymphatic invasion	L0	1.000			1.000		
	L1	1.198	1.138	1.260	1.385	1.284	1.493
	LX/n.s.	1.942	1.717	2.196	2.478	2.097	2.929
Vein invasion	V0	1.000			1.000		
	V1/2	1.317	1.247	1.391	1.360	1.248	1.481
	VX/n.s.	1.224	1.089	1.375	1.189	1.010	1.398

n.s.: not spezified

Supplement-Table S2 Sensitivity analyses: Unadjusted and adjusted* hazard ratios with 95%-CI for all-cause mortality following treatment in GCS-certified colorectal cancer centers compared to treatment in non-certified hospitals

* adjusted for age, sex, year of diagnosis, UICC-stage, grade, lymphatic, and vein invasion

	HR	Lower 95%-CI	Upper 95%-CI
C18 Colon all stages excl. unknown stage univariable	0.889	0.855	0.924
C18 Colon all stages excl. unknown stage multivariable	0.908	0.873	0.945
C20 Rectum all stages excl. unknown stage univariable	0.843	0.799	0.890
C20 Rectum all stages excl. unknown stage multivariable	0.961	0.909	1.014