

CD44 family proteins in gastric cancer

Table S1. Meta-analysis of CD44v5 in gastric cancer

Stratification	Studies (N)	Patients (N)	Model	RR (95% CI)	P_{RR}	P	I ² (%)	P_{bias}
Degree of differentiation	4	652	Random	0.93 (0.66-1.31)	0.6852	0.0022	79.4	0.0811

RR: risk ratio; N: number of studies or patients; CI: confidence interval; P_{RR} : significance of RR; P : significance for heterogeneity of publications; P_{bias} : significance for publication bias.

Table S2. Sensitivity analysis of CD44 family proteins in gastric cancer

Stratification	CD44v6				CD44s	
	Overall survival		M-stage		Disease free survival	
	Log HR (95% CI)	P_{HR}	RR (95% CI)	P_{RR}	Log HR (95% CI)	P_{HR}
Omitting Songun, I. 2007	0.43 (0.03-0.83)	0.0340	-	-	-	-
Omitting Hong, R. L. 1995	-	-	1.92 (0.66-5.63)	0.2341	1.68 (1.09-2.27)	< 0.0001
Omitting Xin, Y. 2001	-	-	3.16 (0.98-10.13)	0.0534	-	-

HR: Hazard ratio; RR: risk ratio; CI: confidence interval; P_{HR} : significance of HR; P_{RR} : significance of RR.

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Table S3. Narrative review for the survival and CD44 family proteins

Survival	Author	Year	Country	Cut off	Stage	Cancer	Cohort	Sample	Detection	Gene	HR	95% CI	HR Extraction
OS	Muller, W.	1997	Germany	5%	N/A	GC	418	FFPE	WTS-IHC	CD44v5	1.36	1.00-1.84	Calculation
OS	Songun, I.	2005	Netherlands	5%	N/A	R0 GC	286	FFPE	WTS-IHC	CD44v9	1.00	0.76-1.31	Calculation
OS	Songun, I.	2006	Netherlands	0	N/A	R0 GC	286	FFPE	WTS-IHC	CD44v5	0.97	0.74-1.28	Calculation
DFS	Hirata, K.	2013	Japan	3.55%	N/A	EGC	65	FFPE	WTS-IHC	CD44v9	21.8	5.71-83.1	Report-mul
DFS	Hong, R. L.	1995	China	0	N/A	GC	78	Cryostat section	WTS-IHC	CD44v6	0.77	0.28-2.12	Calculation

OS: overall survival; DFS: disease free survival; GC: gastric cancer; EGC: early gastric cancer; R0 GC: R0 resection for gastric cancer; FFPE: formalin fixed paraffin embedded; WTS-IHC: whole tissue section-immunohistochemistry; mul: multivariate.

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Table S4. Narrative review for the clinicopathological characteristics and CD44 family proteins

Clinicopathological Event	Author	Year	N-high	Event-high	N-low	Event-low	N-total	Event-total	Detection	Gene
Location (Non-cardia)	Chong, J. M.	1997	80	63	24	19	104	82	WTS-IHC	CD44v3-5
Location (Non-cardia)	Hirata, K.	2013	13	13	52	51	65	64	WTS-IHC	CD44v9
T-stage (3-4)	Muller, W.	1997	273	92	145	41	418	133	WTS-IHC	CD44v5
T-stage (3-4)	Mirecka, J.	1995	70	24	42	15	112	39	WTS-IHC	CD44v5
T-stage (3-4)	Yasui, W.	1998	46	20	77	13	123	33	WTS-IHC	CD44v9
T-stage (3-4)	Yamaguchi, A.	1995	65	36	129	71	194	107	WTS-IHC	CD44v8-10
N-stage (1-3)	Ura, H.	1996	22	16	88	50	110	66	WTS-IHC	CD44v3
N-stage (1-3)	Chong, J. M.	1997	80	42	24	17	104	59	WTS-IHC	CD44v3-5
N-stage (1-3)	Muller, W.	1997	273	159	145	70	418	229	WTS-IHC	CD44v5
N-stage (1-3)	Yasui, W.	1998	46	20	77	11	123	31	WTS-IHC	CD44v9
N-stage (1-3)	Yamaguchi, A.	1995	65	53	129	104	194	157	WTS-IHC	CD44v8-10
TNM-stage (III-IV)	Yasui, W.	1998	77	20	46	9	123	29	WTS-IHC	CD44v9
TNM-stage (III-IV)	Yamaguchi, A.	1995	65	52	129	99	194	151	WTS-IHC	CD44v8-10
Lymphatic invasion (+)	Chong, J. M.	1997	80	54	24	18	104	72	WTS-IHC	CD44v3-5
Lymphatic invasion (+)	Muller, W.	1997	273	147	145	52	418	199	WTS-IHC	CD44v5
Lymphatic invasion (+)	Yamaguchi, A.	1995	65	57	129	113	194	170	WTS-IHC	CD44v8-10
Vascular invasion (+)	Chong, J. M.	1997	80	50	24	18	104	68	WTS-IHC	CD44v3-5
Vascular invasion (+)	Muller, W.	1997	273	78	145	23	418	101	WTS-IHC	CD44v5
Vascular invasion (+)	Yamaguchi, A.	1995	65	48	129	75	194	123	WTS-IHC	CD44v8-10
Peritoneal invasion (+)	Isozaki, H.	1998	47	5	61	6	108	11	WTS-IHC	CD44s
Peritoneal invasion (+)	Yamaguchi, A.	1995	65	16	129	49	194	65	WTS-IHC	CD44v8-10
Liver metastasis (+)	Isozaki, H.	1998	47	29	61	15	108	44	WTS-IHC	CD44s
Liver metastasis (+)	Ura, H.	1996	22	8	88	22	110	30	WTS-IHC	CD44v3
Liver metastasis (+)	Yamaguchi, A.	1995	65	15	129	13	194	28	WTS-IHC	CD44v8-10
Differentiation (PD/UN)	Mirecka, J.	1995	70	41	41	28	111	69	WTS-IHC	CD44v5
Differentiation (PD/UN)	Li, H.	2000	17	12	57	41	74	53	WTS-IHC	CD44v7
Differentiation (PD/UN)	Li, H.	2000	4	4	70	49	74	53	WTS-IHC	CD44v8-10
Differentiation (PD/UN)	Yasui, W.	1998	328	81	746	258	1074	339	WTS-IHC	CD44v9
Lauren type (Diffuse)	Chong, J. M.	1997	80	43	24	18	104	61	WTS-IHC	CD44v3-5
Lauren type (Diffuse)	Muller, W.	1997	273	60	145	94	418	154	WTS-IHC	CD44v5
Cancer recurrence (+)	Chen, S.	2013	27	10	125	22	152	32	WTS-IHC	CD44s

PD: poorly differentiated; UN: undifferentiated; WTS-IHC: whole tissue section-immunohistochemistry.