

Supplementary Material

Prognostic Value of the Glasgow Prognostic Score or Modified Glasgow Prognostic Score for Patients with Colorectal Cancer Receiving Various Treatments: a Systematic Review and Meta-Analysis

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Table S1. Characteristics of included studies

Study	Year	Country	Design, center	Models [†]	Endpoint [‡]	HRs	n	Age (Years) [§]	Male(%)	Therapies	TNM Stage (cases, %)	Other covariates
Adachi et al.	2014	Japan	Prospective, one center	mGPS	OS	Reported	65	64 (17-38)	59.6%	Resection	Unclear	pN; Systemic chemotherapy
Chan et al.	2017	Australia	Retrospective, database	mGPS	OS	Reported	386	Unclear	Unclear	Resection	Unclear	Age; T stage; N stage; Grade; MMR-BRAF status; NLR; LMR; PLR
Choi et al.	2014	Korea	Retrospective, one center	GPS	CSS	Reported	105	63 (32-86)	60%	Resection	I :12(11.4%); II:29(27.6%); III:40(38.1%); IV:24(22.9%)	Hemoglobin; CEA; Gross appearance; TNM stage; Differentiation
Furukawa et al.	2011	Japan	Retrospective, one center	GPS	OS	Reported	40	Group A: 66.4±10.1 Group B: 64.9±7.6	75%	Chemotherapy	II+III:11(27.5%); IV:29(72.5%)	Primary tumor resection; Chemotherapy for CRLM; Serum CEA; Serum CA19-9;
Guthrie et al.	2013	UK	Prospective, one center	mGPS	CSS	Reported	206	Unclear	58.3%	Resection	I :32(15.5%); II:85(41.3%); III:87(42.2%); IV:2(1.0%)	NLR
Hong et al.	2017	China	Retrospective, one center	mGPS	CSS	Reported	571	62.99±11.78	52%	Resection	I :118(20.7%); II:201(35.2%); III:252(44.1%)	IPI; Age; N stage; Tumor deposits
Ide et al.	2017	Japan	Retrospective, one center	mGPS	OS&CSS	Reported	115	64 (33-83)	71%	Resection	I :13(11.3%); II:20(17.4%); III:82(71.3%)	Pretreatment TNM stage; Pathological TNM stage; Vascular invasion; Pretreatment CEA; CAR
Inoue et al.	2013	Japan	Retrospective, one center	mGPS	CSS	Reported	163	Unclear	Unclear	Chemotherapy	Unclear	Age; PS; Timing of metastasis; Pathology; Metastatic site; CEA level; Response rate
Ishizuka et al.	2012	Japan	Retrospective, one center	GPS	OS&CSS	Reported	271	Unclear	Unclear	Resection	0:16(5.9%); I :66(24.4%); II:92(33.9%); III:76(28.0%); IV:21(7.7%)	Lymphatic invasion; Lymph node metastasis; Platelet count; CRP; CEA; TNM stage
Kim et al.	2017	Korea	Retrospective, one center	mGPS	OS&CSS	Reported	503	62 (18-88)	63%	Chemotherapy	Unclear	Histological type; Primary tumor status; NLR at prechemotherapy; CEA at prechemotherapy; Number of metastatic organs; NLR change pattern; CEA change

												pattern
Kishiki et al.	2013	Japan	Retrospective, one center	mGPS	CSS	Extracted from survival plots	79	Unclear	53.2%	Resection	IV:79(100%)	Hemoglobin; Adjuvant chemotherapy
Kostner et al.	2016	Sweden; Finland; Norway	Retrospective, multiple centers	GPS	OS	Reported	427	Unclear	Unclear	Resection	Unclear	Age; Postop chemotherapy; Size of the largest liver metastasis; Number of liver metastasis; Albumin continuous variable; CRP continuous variable; CRP
Leitch et al.	2007	UK	Retrospective, one center	mGPS	OS&CSS	Reported	Resectable:149 Unresectable:84	R: Unclear U: Unclear	R: 54.4% U: 57.1%	Resection; Chemotherapy	I :22(9.4%); II :62(26.6%); III:65(27.9%); IV:84(36.1%)	Age; TNM stage; Monocyte count; Single liver metastasis; Extra-hepatic disease; Chemotherapy treatment
Lin et al.	2015	China	Retrospective, one center	GPS	OS	Reported	99	Unclear	35.4%	Resection	II:99(100%)	CRP; ALB; Vascular invasion; Perineural invasion; Histology grades; KPS; CEA
Maillet et al.	2014	France	Retrospective, one center	GPS	OS&CSS	Extracted from survival plots	80	65 (36-83)	56.3%	Chemotherapy	Unclear	ECOG PS; Haemoglobin
McSorley et al.	2017	UK	Retrospective, one center	mGPS	CSS	Reported	70	Unclear	54.3%	Resection	Unclear	N stage; SUV peak; TLG
Moug et al.	2010	UK	Retrospective, two centers	mGPS	OS	Reported	206	69.9±10.6(40-95)	55.3%	Resection	I :13(6.3%); II :38(18.4%); III:108(52.4%); IV:47(22.8%)	Age; Node category; Tumor stage; pLNR
Ni et al.	2016	China	Retrospective, one centers	GPS/mGPS	OS	Reported	148	60.2 (20-74)	65.5%	Chemotherapy	IV:148(100%)	Sex; Age; Location of primary tumor; Metastasis number; Hemoglobin; Globulin; CRP/Alb; NLR; PLR; MLR
Nozoe et al.	2014	Japan	Retrospective, one centers	GPS/mGPS	OS	Extracted from survival plots	272	70.4 (24-90)	58.8%	Resection	I :69(25.4%); II :78(28.7%); III:92(33.8%); IV:33(12.1%)	Tumor stage; Venous invasion
Park et al.	2015	UK	Retrospective, one center	mGPS	OS&CSS	Reported	1000	Unclear	54.8%	Resection	0:13(1.3%); I :148(14.8%); II :457(45.7%); III:382(38.2%)	Age; Presentation; Adjuvant therapy; T stage; N stage; Differentiation; Venous invasion; Margin involvement; Peritoneal involvement
Powell et al.	2012	UK	Prospective one center	mGPS	CSS	Reported	411	Unclear	55.2%	Resection	I :42(10.2%); II :189(46.0%); III:180(43.8%)	Age; T stage; Lymph node ratio; Tumor stage; Peterson index; Klintrup score
Read et al.	2009	Australia	Retrospective, two centers	GPS	OS	Extracted from survival plots	51	64 (40-79)	58.8%	Chemotherapy	IV:51(100%)	CRP; Type of treatment; PS; SAP

Sharma et al.	2008	Australia	Retrospective, multiple centers	GPS	OS	Extracted from survival plots	52	70.5	64%	Chemotherapy	IV:52(100%)	An elevated CEA
Shibutani et al.	2015	Japan	Retrospective, one center	GPS	OS&CSS	Reported	110	64 (27-86)	57.3%	Chemotherapy	Unclear	No. of organs affected by metastasis; Pre-treatment CEA; Pre-treatment NLR; Pre-treatment CRP; Pro-treatment CRP
Shimura et al.	2017	Japan	Retrospective, one center	mGPS	OS	Reported	92	65 (31-90)	61.9%	Resection	IV:92(100%)	CEA; NLR; Performance status; Histology; T factor; Peritoneal metastasis; Number of metastatic organs; Age; Tumor location
Son et al.	2013	Korea	Retrospective, one center	mGPS	CSS	Reported	624	Unclear	58.9%	Resection	I :79(12.7%); II :233(37.3%); III :312(50.0%)	Tumor stage; CEA level; Fibrinogen-level; Grade; Age; NLR; PLR; Chemotherapy
Song et al.	2015	Korea	Retrospective, one center	mGPS	OS	Reported	177	52 (25-81)	46.9%	Chemotherapy	Unclear	LMR; CA19-9; AST; KM treatment duration
Sugimoto et al.	2012	Japan	Retrospective, one center	GPS	CSS	Reported	366	Unclear	57.1%	Resection	II :166(45.4%); III :200(54.6%)	Invasion depth; Degree of lymphatic invasion; Degree of venous invasion; Metastatic lymph nodes; Residual tumor; Location
Sun et al.	2014	China	Retrospective, one center	mGPS	OS&CSS	Reported	255	59.47±12.63	52.9%	Resection	I :29(11.4%); II :139(54.5%); III :87(34.1%)	PLR; NLR; WBC count; AFP; CEA; Vascular invasion; Fibrinogen; BMI; TNM stage; Grade
Toiyama et al.	2011	Japan	Retrospective, one center	GPS/ mGPS	OS&CSS	Reported	219	66 (29-91)	62.1%	Chemotherapy	II :125(57.1%); III :94(42.9%)	Age; Gender; Chemotherapy; Venous invasion; Serosal invasion; Pathology; CEA
Tokunaga et al.	2017	Japan	Retrospective, one center	mGPS	OS&CSS	Reported	468	68 (19-93)	59.2%	Resection	I :197(42.1%); II :149(31.8%); III :122(26.1%)	PNI
Tunc et al.	2015	Turkey	Retrospective, one center	GPS	CSS	Reported	115	66 (32-91)	56%	Resection	I + II :58(50.4%); III + IV :57(49.6%)	Age; CEA; Poorly differentiated tumor
Watt et al.	2016	UK	Retrospective, one center	mGPS	OS&CSS	Reported	813	Unclear	54.6%	Resection	0 :11(1.4%); I :132(16.2%); II :356(43.8%); III :314(38.6%)	None
Yamamoto et al.	2012	Japan	Retrospective, two centers	mGPS	CSS	Reported	42	Unclear	61.9%	Chemotherapy	Unclear	Age; Advanced/recurrent; D-dimer

† Model: GPS: Glasgow prognostic score; mGPS: Modified Glasgow prognostic score.

‡ Endpoint: OS: Overall survival; CSS: Cancer-specific survival.

[§]Age was expressed as mean with standard deviation or medians with interquartile ranges. For studies where age of patients with CRC was not available, it was expressed as unclear.

pN: p N stage; NLR: Neutrophil-to-lymphocyte ratio; MLR, monocyte-to-lymphocyte ratio; LMR: Lymphocyte-to-monocyte ratio; PLR: Platelet-to-lymphocyte ratio; IPI: inflammation related prognostic index; CEA: Carcinoembryonic antigen; CA19-9: carbohydrate antigen 19-9; CAR: C-reactive protein-to-albumin; PS: performance status; CRP: C-reactive protein; ALB: Albumine; CEA: Carcinoembryonic antigen; KPS: Karnofsky Performance Status; ECOG-PS: Eastern cooperative oncology group performance status; SUV peak: Peak standardised uptake value; TLG: total lesion glycolysis; pLNR: Positive lymph node ratio; SAP: serum alkaline phosphatase; AFP: Alpha-fetoprotein; BMI: Body mass index; KM: Korean Medicine; AST: Aspartate aminotransferase; PNI: Prognostic nutritional index.