Detailed Baseline Information from 42 Studies

First author/year	Follow-up start time	Tumor site	Tumor stage	HSPs (positive/ High)	Method	Specimen type	Cut-off value	Chemotherapy regimen
Elizabeth M Tweedle 2010	Post-diagnosis	colon:199,rectum:203	Depth of invasion: T1:20,T2:60,T3:273,T4:51; Nodal status: N0:225,N1:99;N2:80	HSP27	IHC	Primary tissue	The scoring was determined by multiplying the intensity score by the extent score based on immunohistochemical (IHC) staining: the Low expression group was defined as a composite index ≤ 3, and the High expression group was defined as a composite index > 3. The range of the composite index was 0–9.	A total of 121 patients (30%) received chemotherapy. Among the 103 patients (85%) with known chemotherapeutic agents, all were treated with 5-fluorouracil, and 4 (4%) received additional drugs (irinotecan or oxaliplatin). Second-line and third-line chemotherapy was administered to 37/103 (36%) and 19/103 (18%) patients, respectively. Other agents (irinotecan, oxaliplatin, mitomycin C, or levamisole) were given in 9/37 (24%) of second-line and 10/19 (53%) of third-line settings.Short-course radiotherapy was administered to 13% of rectal cancer patients as part of the CR07 trial (5 Gy fractions given in 5 treatments within 1 week, followed by surgery within 1 week of completion). In contrast, 15% of patients received long-course radiotherapy (intended for patients with bulkier tumors, consisting of 45 Gy in 25 daily fractions over 5 weeks, followed by surgery after 6–10 weeks).
Feng Wang 2012	Postoperative	colon:122,rectum:53	Depth of invasion: T0-T2:112;T3-T4:152; Nodal status: N0:80,N1-N2:63	HSP27	IHC	Primary tissue	Scoring was based on the proportion of positive tumor cells out of the total tumor cells, ranging from 0% to 100% in 5% increments. The percentages of positive cells across all samples were ranked, and the median value of 70% was used as the cutoff to dichotomize the samples into "High expression (>70%)" and "Low expression (≤70%)" groups.	A total of 113 patients underwent surgery alone, and 62 patients received 5-fluorouracil (5-FU) adjuvant chemotherapy. The 5-FU adjuvant therapy was administered according to standard protocols and dosages.
Karina Bauer 2012	Postoperative	right sided:63;left sided:292	pT1:21,pT2:62, pT3:193,pT4 79; pN1abc-pN2ab:140 ; Organ metastasis 56;	HSP70 , HSP27	IHC	Primary tissue	The Immunoreactivity Score (IRS) system was employed to quantify the staining results, where IRS was calculated as the product of the staining intensity score and the percentage score of positive tumor cells. The scoring range was 0 to 12. Median, terciles, and quartiles were used as cutoff points. For HSP27, low, intermediate, and high expression were defined as IRS = 0, IRS = 1–2, and IRS = 3–12, respectively; for HSP70, low, intermediate, and high expression were defined as IRS = 0–1, IRS = 2–3, and IRS = 4–12, respectively.	All patients had a primary resection without neoadjuvant radio- or chemotherapy
Maria Anna Kalioraki 2019	Postoperative	colon:127,rectum:61	TNM stage: I:22,II77; III66:IV23	HSPB3	qPCR	Primary tissue	X-tile software was used to determine the optimal cutoff point for HSPB3 mRNA expression in colorectal cancer, based on its ability to generate the best cutoff value via the minimum P-value statistic with correction. This optimal cutoff was 4.20 RQU, corresponding to the 27th percentile, and was determined using the default settings of the algorithm.	NA
Jan Hrudka 2021	Postoperative	right sided:117;left sided:179	TNM Stage: I+II:150;III+IV:147	HSP27 HSP70 HSP110	IHC	Primary tissue	Tumors were considered positive for HSP27 and HSP70 using a cutoff of ≥1% stained cells. The staining pattern of HSP110 was relatively diffuse. The researchers adopted a semi-quantitative assessment, categorizing it into negative, weak, moderate, and strong. The "negative/weak" categories were merged into the negative group, and the "moderate/strong" categories were merged into the positive group.	NA
Tadanobu Shimura 2025	After the initial discharge	colon:101,rectum:55	TNM Stage: I+II+III:132;IV:24	HSP27	IHC	Primary tissue	The continuous immunohistochemistry (IHC) scores were dichotomized using the Youden's Index, with high expression defined as IHC score > 4 and low expression as IHC score ≤ 4.	NA
Tong Tong Zhang 2015	Postoperative	colorectal	TNM stage: I-II:99;III-IV101	DNAJB6	IHC	Primary tissue	Scoring was based on staining intensity, using a cutoff value of 1. The Low expression group (scores 0–1, negative/weak) and the High expression group (scores 2–3, moderate/strong) were defined accordingly.	NA
Shaoshan Yang 2020	NA	colorectal	NA	DNAJA1	IHC	Primary tissue	Scoring was based on staining intensity using a cutoff value of 1: the Low expression group (scores 0–1, negative/weak) and the High expression group (scores 2–3, moderate/strong).	NA
Koichiro Mori 2017	Postoperative	colorectal	TNM stage: I:48,II:56;III:53	HSP47	IHC	Primary tissue	The optimal cutoff value was determined using ROC curve analysis combined with the Youden index, with a resulting score of 9.	NA
Yijye Chen 2020	NA	ascending colon: 206 ;transverse colon:26 ;descending colon:133 ;rectal 163	TNM stage: I:111;II:237; III183;IV:90	HSP47	qRT-PCR	Primary tissue	Patients were stratified into "high-expression" and "low-expression" groups for survival analysis based on the cutoff point on the ROC curve that yielded the highest sensitivity and specificity. However, the specific numerical value was not explicitly provided in the text or figures.	NA
		colon:261,rectum:33	TNM stage: I:42,II:100; III:105;IV:79	HSP47	qRT-PCR	Primary tissue	The optimal cutoff value was determined using ROC curve analysis combined with the Youden index. The cutoff value for high and low expression of the HSP47 gene was 0.0924641.	NA
Koichiro Mori 2020	Postoperative	colorectal	TNM stage: I:33,II:44; III:33,IV:29	HSP47	qRT-PCR	Primary tissue		NA
Michal Vocka 2019	Prior to mCRC treatment or palliative therapy	left sided colon:50,right sided colon:20;rectum:27	metastatic CRC	HSP60	ELISA	Serum	Based on ROC curve analysis, the cutoff value for serum HSP60 was set at 0.42 ng/ml.	NA
Myunghee Kang 2023	Postoperative	cecum:9; ascending colon:79; hepatic flexure:8; transverse colon:28; splenic flexure:4; descending colon:12; sigmoid-descending: 5; sigmoid colon:110; rectosigmoid colon:81; rectum:120	TNM stage: I:77; II:163; III:160; IV:56	HSP60	IHC	Primary tissue	According to the immunohistochemistry (IHC) scoring criteria, a score of 3 was used as the cutoff (high expression: ≥3; low expression: 0–2).	NA
	NA	colorectal	TNM stage: I+II:148;III+IV:116	HSPD1	Gene expression data	NA	Based on TCGA data and determined using the MaxStat algorithm, the High group was defined as > 14.1791 and the Low group as ≤ 14.1791.	
Judit Kocsis and Balázs Madaras 2010	Post-diagnosis	Colon:107; Sigmoid:111; Rectum:49; Colon+rectum:3; Sigmoid+rectum:1; Colorectal+other tumor:8	TNM-T stage: 0:1/2/3/4;not available:1/4/35/104/19/16;TNM-N stage:0/1/2;not available:71/68/19/21;TNM-M stage: 0/1;not available:135/33/11	HSP70	ELISA	Serum	Using the median serum HSP70 level (1.65 ng/ml) as the cutoff, the low HSP70 group was defined as having a concentration < 1.65 ng/ml, and the high HSP70 group as ≥ 1.65 ng/ml.	All but 31 patients received adjuvant or first-line, 5-FU-based chemotherapy according to current national guidelines.
Judit Kocsis 2011	Post-diagnosis	Colon:111;Sigmoid 13;Rectum 51	TNM-T stage: 0:1/2/3/4;not available:1/4/33/102/19/16;TNM-N stage: 0/1/2;not available:68/67/19/21;TNM-M stage: 0/1/not available:131/33/11	HSP70	ELISA	Serum	Using the median serum HSP70 level (1.67 ng/ml) as the cutoff, patients were stratified into a low-expression group (< 1.67 ng/ml) and a high-expression group (≥ 1.67 ng/ml).	All but 30 patients received adjuvant or firstline, fluorouracil (5-FU)-based chemotherapy according to current national guidelines.
Hiroyuki Takahashi 2011	Postoperative	colorectal	TNM Stage: I+II:65;III+IV:190	GRP78 GRP94	IHC	Primary tissue	The immunohistochemical scoring criteria were defined as: Negative (-), 0–5% positive cells; Weak positivity (+), 6–25% positive cells; Moderate positivity (++), 26–50% positive cells; Strong positivity (+++), 51–100% positive cells. A score of >5% positive cells was considered "positive expression".	NA
Perri Rozenberg 2013	Postoperative	colorectal	NA	HSP70 GRP75	ELISA	Serum	Low expression group: < 1.65 ng/ml; High expression group: > 1.65 ng/ml Based on ROC curve analysis, patients were stratified into a low expression group (< 60 ng/ml) and a high expression group (≥ 60 ng/ml).	NA
Ritta Jubran 2017	Post-diagnosis	right sided colon:44; Colon transversum:17; Left colon:89; Rectum:84; Unknown:1	TNM stage: I:46; II:59; III:67; IV:50; Unknown:13	Hsp70, GRP75	ELISA	Serum	Using the median serum HSP70 level (1.65 ng/ml) as the cutoff, patients were stratified into a Low expression group (≤ 1.65 ng/ml) and a High expression group (> 1.65 ng/ml). The median value of serum Mortalin was 30 ng/ml. Patients were stratified into a Low expression group (≤ 30 ng/ml) and a High expression group (> 30 ng/ml).	NA
Xin Wang 2019	Post-diagnosis	colon:30;rectum:33	Duke's stage: A, B stage: 22; C, D stage: 41	HSP70	IHC	Primary tissue	Determined by the product of the staining intensity score and the positive cell proportion score. A score > 3 was defined as positive (High Expression), and a score ≤ 3 was defined as negative (Low/Negative Expression).	NA
Min Gyoung Pak 2017	Postoperative	colorectal	pTNM stage: 0:6;I:90;IIA:293;IIB:2;IIC:4;IIIA:14;IIIB:211;IIIC:50;IVA:25;IVB:19	TRAP1	IHC	Primary tissue	Based on the semi-quantitative immunohistochemistry (IHC) scoring method (H-Score: Total Score = Proportion Score × Intensity Score), the final IHC score ranged from 0to 12. The high expression group was defined as a total score ≥ 6, and the low expression group was defined as a total score < 6.	NA
Shuming Zhang 2019	Postoperative	ascending colon:35;transverse colon:25;descending-sigmoid colon:39	TNM stage: I- II:59 ;III-IV:40	HSP90	IHC	Primary tissue	Using a modified H-Score system (range: 0–12), patients were stratified into a Low expression group (0–3 points) and a High expression group (4–12 points).	NA
Jae Seok Lee 2020	Postoperative	ascending and cecum:137;transverse ;29;descending;23;sigmoid:217;rectum:294 ;site not identified:9	NA	GRP94	IHC	Primary tissue	Using a semi-quantitative IHC scoring system (H-Score: Intensity × Proportion; range: 0–7), patients were stratified into a Low expression group (score < 4) and a High expression group (score ≥ 4).	NA
Dávid Fodor 2023	Post-diagnosis	rectal adenocarcinoma	locally advanced (cT3/T4 or cN+ and cM0)	HSP90	IHC	Primary tissue	Based on the semi-quantitative immunohistochemical staining intensity score, patients were stratified into a Low Expression group (score 0 or +; Negative/Weakly Positive) and a High Expression group (score ++ or +++; Moderately/Strongly Positive).	All patients received neoadjuvant adiochemotherapy (NRCT) followed by surgery.As concomitant chemotherapy, 500 mg/m2 of 5-fluorouracil in a continuous infusion and a 30 mg/m2 folic acid bolus on days 1–5 of the 1st and the 5th weeks of radiotherapy were administered. Four weeks after the completion of NRCT, the patients were re-staged and a definitive surgical resection was performed 6–9 weeks after the neoadjuvant therapy in all 109 cases
Zhenzhen CAO 2025	Post-diagnosis	colon:49;rectum:52	TNM stage: I-II:58;III:43	HSP90α	ELISA	Serum	Patients were stratified into high and low expression groups based on the mean value of the samples.The High expression group was defined as values ≥ 76.66 μg/L, while the Low expression group was defined as values < 76.66 μg/L.	NA
Nan JIANG 2025	Post-diagnosis	colorectal	I-II	HSP90α	ELISA	Serum	Using the median value (199.49 ng/ml) as the cutoff, patients were stratified into a High expression group (> 199.49 ng/ml) and a Low expression group (≤ 199.49 ng/ml).	NA
Coralie Dorard 2011	NA	right sided MSI CRC:72;left sided MSI CRC:9;na:3	TNM stage: II:59;III:25	HSP110 ΔE9/HSP110 wt	qPCR	Primary tissue	Using the ratio of HSP110△E9 to HSP110wt mRNA, patients were stratified with cutoff values of 75% for Group 1 and 50% for Group 2.	Adjuvant chemotherapy (5-FU + leucovorin ± oxaliplatin)
Jung Ho Kim 2014	Post-diagnosis	right sided:113;left sided:55	TNM stage: I-II:108;III:60	HSP110 wt	IHC	Primary tissue	Based on the semi-quantitative IHC score (cutoff: 1+), patients were stratified into a low expression group (0/1+; favorable prognosis) and a high expression group (2+/3+; poor prognosis).	5-Fluorouracil (5-FU)-based chemotherapy
				HSP110 T17 deletion	PCR	Primary tissue	Based on DNA deletion length (cutoff: 4 bp), deletions were classified as large (≥ 4 bp) or small (< 4 bp).	
Ada Collura 2014	Postoperative	distal colon:127;proximal colon:442;rectum:13	TNM stage: II:416;III:171	HSP110 T17 deletion	PCR	Primary tissue	Based on DNA deletion length (cutoff: 5 bp), deletions were classified as large (≥ 5 bp) or small (< 5 bp).	adjuvant therapy (n ¼ 77) were treated mainly with 5-fluorouracil–based chemotherapy (ie, 5-fluorouracil plus leucovorin), either alone (fluorouracil and leucovorin regimen,n ¼ 42; fluorouracil and folinic acid regimen, n ¼ 2) or incombination with other drugs (oxaliplatin, n ¼ 32). 51 received fluorouracil/leucovorin, 29 received oral prodrug of fluorouracil (21 capecitabine and 8 tegafur-uracil), 43 received fluorouracil/leucovorin/oxaliplatin and 2 received capecitabine/oxaliplatin.
Jung Ho Kim 2015	Post-diagnosis	distal colon:42;proximal colon:83	TNM stage II-III	HSP110 wt	IHC	Primary tissue	Based on the staining intensity score (cutoff: 1+), samples were classified as negative (low-risk phenotype) for a score of 0 and positive for scores of 1+, 2+, or 3+.	
Hyeon Jeong Oh 2017	Post-diagnosis	proximal colon:106;distal colon/rectal:58	TNM stage: I:18; II:87; III:43; IV:16	HSP110 wt	IHC	Primary tissue	Based on the predominant intensity across the whole-slide immunohistochemistry, using 1 as the cutoff. Samples with a predominant staining intensity of 0 or 1 were defined as low expression, while those with a predominant staining intensity of 2 or 3 were defined as high expression.	NA
				HSP110 T17 deletion	PCR	Primary tissue	Based on DNA deletion length, using 4 bp as the cutoff. Deletions ≥ 4 bp were defined as large deletions, and deletions < 4 bp were defined as small deletions.	
Gaelle Tachon 2022	Post-diagnosis	ascending:304;descending:58;rectum:15;missing values:4	TNM stage: 0:2; I:29; II:165; III:121; IV:59; Missing values:5	HSP110 (n=371)	IHC	Primary tissue	Determined based on the predominant intensity of whole-slide immunohistochemistry, using 1 as the cutoff. Samples with a predominant staining intensity of 0 or 1 were defined as low expression, while those with a predominant staining intensity of 2 or 3 were defined as high expression.	Most adjuvant treatment was 5-FU associated with oxaliplatin (80.6%, n 83/103) and others,fluoropyrimidine alone.
				HSP110 T17 deletion (n=351)	PCR	Primary tissue	Based on DNA deletion length (cutoff: 5 bp), deletions were classified as large (≥ 5 bp) or small (< 5 bp).	

Abbreviation: NA:Not Available;IHC:Immunohistochemistry;ELISA:Enzyme-Linked Immunosorbent Assay; PCR:Polymerase Chain Reaction;TNM:TNM Classification of Malignant Tumours;ROC:Receiver Operating Characteristic.