

SUPPLEMENTARY TABLES

Supplementary Table 1. Clinical and pathological characteristics in 507 colorectal cancer patients.

| Variables | Categories | No. of patients (%) | |
|-----------------------|-------------------------|------------------------|------------------------|
| | | Discovery cohort (430) | Validation cohort (77) |
| Gender | Male | 243(56.51%) | 41(53.25%) |
| | Female | 187(43.49%) | 36(46.75%) |
| Age | ≤60years | 206(47.90%) | 51(66.23%) |
| | >60years | 224(52.1%) | 26(33.77%) |
| Tobacco | Yes | 88(20.47%) | 14(18.18%) |
| | No | 342(79.53%) | 63(81.82%) |
| Alcohol | Yes | 71(16.51%) | 7(9.09%) |
| | No | 359(83.49%) | 70(90.91%) |
| Hypertension | Yes | 60(13.95%) | 14(18.18%) |
| | No | 370(86.05%) | 63(81.82%) |
| Diabetes | Yes | 30(6.98%) | 4(5.19%) |
| | No | 400(93.02%) | 73(94.81%) |
| Tumor side | Left | 302(70.23%) | 46(59.74%) |
| | Right | 128(29.77%) | 31(40.26%) |
| Metastasis | Liver | 220(51.16%) | 31(40.26%) |
| | Lung | 24(5.58%) | 2(2.60%) |
| | bone | 11(2.56%) | 0(0.00%) |
| | Peritoneu | 88(20.47%) | 15(19.48%) |
| | Urogenital system | 37(8.60%) | 5(6.49%) |
| No palliative surgery | Multiple | 50(11.63%) | 24(31.17%) |
| | No treatment | 88(20.47%) | - |
| | Radiochemotherapy alone | 152(35.35%) | 41(53.25%) |

| | | | |
|--------------------|-------------------------------|-----------------------|-----------------------|
| Palliative surgery | Surgery alone | 64(14.88%) | - |
| | Surgery and radiochemotherapy | 126(29.30%) | 36(46.75%) |
| CEA | ≤5 ng/mL | 106(24.65%) | 19(24.68%) |
| | >5 ng/mL | 292(67.91%) | 43(55.84%) |
| | NA | 32(7.44%) | 15(19.48%) |
| CA199 | ≤37 U/mL | 185(43.02%) | 21(27.27%) |
| | >37 U/mL | 212(49.30%) | 42(54.55%) |
| | NA | 33(7.68%) | 14(18.18%) |
| NLR(median, IQR) | | 3.14(2.25-4.60) | 3.23(2.41-4.48) |
| dNLR(median, IQR) | | 3.57(2.58-5.23) | 3.71(2.78-5.08) |
| LMR(median, IQR) | | 3.31(2.23-4.86) | 2.97(2.22-4.24) |
| PLR(median, IQR) | | 189.92(140.26-255.25) | 169.37(128.07-224.92) |
| Fib (median, IQR) | g/L | 3.48 (2.90-4.26) | 3.87(3.09-4.43) |
| Alb (median, IQR) | g/L | 38.85 (35.10-41.70) | 39.83(36.92-44.12) |
| pAlb (median, IQR) | mg/L | 154.00(102.52-199.77) | 160.00(111.32-208.14) |
| AFR (median, IQR) | | 11.13 (8.83-14.05) | 10.42(8.32-12.61) |
| FPR (median, IQR) | | 23.18(15.31-43.08) | 25.50(14.57-36.83) |
| Number of death | | 346(80.47%) | 45(58.44%) |
| PFS (median, IQR) | months | 8.0(4.0-13.0) | 14.5(8.0-20.0) |
| OS (median, IQR) | months | 12.0(5.0-23.0) | 16.0(10.0-27.0) |

Abbreviation: Fib: fibrinogen; Alb: albumin; pAlb: pre-albumin; AFR: albumin to fibrinogen ratio; FPR: fibrinogen to pre-albumin ratio; PLR: Platelet to lymphocyte ratio; dNLR: derived neutrophil to lymphocyte ratio; NLR: Neutrophil granulocyte to lymphocyte ratio; LMR: lymphocyte to monocyte ratio; CEA: carcinoembryonic antigen; CA199: carbohydrate antigen 19-9; NA: not available; PFS: progression-free survival; OS: Overall survival; IQR: interquartile ranges.

Supplementary Table 2. Univariate and multivariate analyses of prognostic factors for 3 years' PFS and OS by Cox regression model in discovery cohort.

| Variables | Progression-free survival | | | | Overall survival | | | |
|--------------------------|---------------------------|------------------|-----------------------|------------------|---------------------|------------------|-----------------------|------------------|
| | Univariate analysis | | Multivariate analysis | | Univariate analysis | | Multivariate analysis | |
| | Crude HR(95% CI) | p-value | Adjusted HR(95% CI) | p-value | Crude HR(95% CI) | p-value | Adjusted HR(95% CI) | p-value |
| Sex (male) | 1.208(0.876-1.667) | 0.249 | - | - | 1.149(0.928-1.422) | 0.203 | - | - |
| Age (>60 years) | 1.107 (0.805-1.521) | 0.531 | - | - | 1.488(1.203-1.841) | <0.001 | 1.477(1.159-1.882) | 0.002 |
| Alcohol (yes) | 0.739(0.466-1.172) | 0.198 | - | - | 0.906(0.684-1.199) | 0.490 | - | - |
| Tobacco (yes) | 0.663(0.437-1.004) | 0.052 | - | - | 0.806(0.619-1.048) | 0.107 | - | - |
| Hypertension (yes) | 0.859(0.556-1.328) | 0.494 | - | - | 0.829(0.608-1.131) | 0.237 | - | - |
| Diabetes (yes) | 1.066(0.652-1.744) | 0.798 | - | - | 0.721(0.468-1.110) | 0.138 | - | - |
| Primary side (Right) | 1.261(0.887-1.795) | 0.197 | - | - | 1.367(1.089-1.716) | 0.007 | - | - |
| Palliative surgery (Yes) | 0.736(0.535-1.014) | 0.060 | - | - | 0.521(0.419-0.648) | <0.001 | 0.511(0.402-0.649) | <0.001 |
| Radio-chemotherapy (Yes) | 1.111(0.755-1.633) | 0.594 | - | - | 0.568(0.457-0.705) | <0.001 | 0.600(0.473-0.762) | <0.001 |
| CEA (>5ng/mL) | 1.475(1.020-2.132) | 0.039 | - | - | 1.407(1.085-1.825) | 0.010 | - | - |
| CA199 (>37U/mL) | 2.170(1.540-3.057) | <0.001 | 2.049(1.446-2.094) | <0.001 | 1.727(1.379-2.164) | <0.001 | 1.678(1.329-2.119) | <0.001 |
| PLR(>166.1) | 1.749(1.260-2.429) | 0.001 | 1.601(1.106-2.317) | 0.013 | 1.636(1.306-2.050) | <0.001 | - | - |
| dNLR(>3.7) | 1.620(1.175-2.234) | 0.003 | - | - | 1.791(1.448-2.215) | <0.001 | 1.629(1.298-2.044) | <0.001 |
| NLR (>2.9) | 1.811(1.312-2.500) | <0.001 | - | - | 1.786(1.434-2.223) | <0.001 | - | - |
| LMR(>1.5) | 0.539(0.305-0.953) | 0.034 | - | - | 0.470(0.342-0.646) | <0.001 | - | - |
| Fib (>3.9 g/L) | 2.257(1.573-3.239) | <0.001 | - | - | 1.606(1.251-2.062) | <0.001 | 1.344(1.024-1.764) | 0.033 |
| Alb (>35.7 g/L) | 0.726(0.491-1.073) | 0.108 | - | - | 0.648(0.515-0.815) | <0.001 | - | - |
| pAlb (>139.8mg/L) | 0.491(0.302-0.799) | 0.004 | - | - | 0.443(0.306-0.640) | <0.001 | 0.478(0.321-0.711) | <0.001 |
| AFR (>9.9) | 0.541(0.378-0.775) | 0.001 | - | - | 0.579(0.452-0.740) | <0.001 | - | - |
| FPR (>22.8) | 2.326(1.419-3.815) | 0.001 | 1.896 (1.097-3.279) | 0.022 | 2.598(1.768-3.816) | <0.001 | 1.583(1.042-2.405) | 0.031 |

Abbreviation: HR: hazard ratio; CI: confidence interval; Fib: fibrinogen; Alb: albumin; pAlb: pre-Albumin; AFR: albumin to fibrinogen ratio; FPR: fibrinogen to pre-Albumin ratio; PLR: Platelet to lymphocyte ratio; dNLR: derived neutrophil to lymphocyte ratio; NLR: Neutrophil granulocyte to lymphocyte ratio; LMR: lymphocyte to monocyte ratio; CEA: carcinoembryonic antigen; CA199: carbohydrate antigen 19-9; adjusted HR (95%) was adjusted by sex, age, alcohol, tobacco, hypertension, diabetes, primary side, palliative resection, radio-chemotherapy, CEA, CA199, PLR, dNLR, NLR, LMR.

Supplementary Table 3. Univariate and multivariate analyses of prognostic factors for 3 years' PFS and OS by Cox regression model in left-sided mCRC patient in discovery cohort.

| Variables | Progression-free survival | | | | Overall survival | | | |
|----------------------------|---------------------------|------------------|-----------------------|--------------|---------------------|------------------|-----------------------|------------------|
| | Univariate analysis | | Multivariate analysis | | Univariate analysis | | Multivariate analysis | |
| | Crude HR(95% CI) | p-value | Adjusted HR(95% CI) | p-value | Crude HR(95% CI) | p-value | Adjusted HR(95% CI) | p-value |
| Sex (male) | 1.065(0.728-1.559) | 0.745 | - | - | 1.082(0.835-1.402) | 0.553 | - | - |
| Age (>60 years) | 1.353(0.855-1.812) | 0.253 | - | - | 1.723(1.329-2.234) | <0.001 | 1.723(1.285-2.310) | <0.001 |
| Alcohol (yes) | 0.775(0.467-1.285) | 0.323 | - | - | 0.878(0.633-1.219) | 0.438 | - | - |
| Tobacco (yes) | 0.651(0.411-1.031) | 0.067 | - | - | 0.753(0.554-1.022) | 0.069 | - | - |
| Hypertension (yes) | 1.001(0.604-1.658) | 0.997 | - | - | 0.913(0.632-1.319) | 0.628 | - | - |
| Diabetes (yes) | 0.966(0.544-1.890) | 0.966 | - | - | 0.732(0.426-1.256) | 0.258 | - | - |
| Palliative resection (Yes) | 0.735(0.505-1.070) | 0.108 | - | - | 0.501(0.383-0.654) | <0.001 | 0.592(0.441-0.794) | <0.001 |
| Radio-chemotherapy (Yes) | 1.258 (0.788-2.009) | 0.336 | - | - | 0.611(0.468-0.798) | <0.001 | 0.716(0.528-0.972) | 0.032 |
| CEA (>5ng/mL) | 1.393(0.915-2.120) | 0.122 | - | - | 1.274(0.940-1.727) | 0.118 | - | - |
| CA199 (>37U/mL) | 1.977(1.332-2.935) | 0.001 | 1.940(1.298-2.900) | 0.001 | 1.698(1.298-2.222) | <0.001 | 1.566(1.185-2.072) | 0.002 |
| PLR(>166.1) | 1.937(1.326-2.828) | 0.001 | 1.600(1.052-2.234) | 0.028 | 1.840(1.413-2.395) | <0.001 | - | - |
| dNLR(>3.7) | 1.932(1.323-2.822) | 0.001 | - | - | 2.051(1.585-2.655) | <0.001 | 1.726(1.294-2.303) | <0.001 |
| NLR (>2.9) | 2.023(1.382-2.959) | <0.001 | - | - | 1.995(1.532-2.598) | <0.001 | - | - |
| LMR(>1.5) | 0.437(0.221-0.867) | 0.018 | - | - | 0.374(0.253-0.553) | <0.001 | - | - |
| Fib (>3.9 g/L) | 3.165(2.023-4.954) | <0.001 | 1.934(1.153-3.243) | 0.012 | 1.917(1.403-2.619) | <0.001 | 1.428(1.017-2.007) | 0.040 |
| Alb (>35.7 g/L) | 0.461(0.289-0.735) | 0.001 | 0.603(0.370-0.983) | 0.042 | 0.511(0.384-0.681) | <0.001 | 0.716(0.522-0.982) | 0.038 |
| pAlb (>139.8mg/L) | 0.444(0.246-0.801) | 0.007 | - | - | 0.414(0.266-0.644) | <0.001 | 0.517(0.322-0.831) | 0.006 |
| AFR (>9.9) | 0.344(0.219-0.541) | <0.001 | 0.568(0.340-0.951) | 0.032 | 0.453(0.332-0.618) | <0.001 | - | - |
| FPR (>22.8) | 3.150(1.708-5.810) | <0.001 | 2.254(1.167-4.354) | 0.015 | 2.984(1.874-4.753) | <0.001 | 1.769(1.066-2.935) | 0.027 |

Abbreviation: HR: hazard ratio; CI: confidence interval; Fib: fibrinogen; Alb: albumin; pAlb: pre-Albumin; AFR: albumin to fibrinogen ratio; FPR: fibrinogen to pre-Albumin ratio; PLR: Platelet to lymphocyte ratio, dNLR: derived neutrophil to lymphocyte ratio; NLR: Neutrophil granulocyte to lymphocyte ratio; LMR: lymphocyte to monocyte ratio; CEA: carcinoembryonic antigen; CA199: carbohydrate antigen 19-9; adjusted HR (95%) was adjusted by sex, age, alcohol, tobacco, hypertension, diabetes, palliative resection, radio-chemotherapy, CEA, CA199, PLR, dNLR, NLR, LMR.

Supplementary Table 4. Univariate and multivariate analyses of prognostic factors for 3 years' PFS and OS by Cox regression model in right-sided mCRC patient in discovery cohort.

| Variables | Progression-free survival | | | | Overall survival | | | |
|----------------------------|---------------------------|-----------------|-----------------------|-----------------|---------------------|------------------|-----------------------|------------------|
| | Univariate analysis | | Multivariate analysis | | Univariate analysis | | Multivariate analysis | |
| | Crude HR(95% CI) | <i>p</i> -value | Adjusted HR(95% CI) | <i>p</i> -value | Crude HR(95% CI) | <i>p</i> -value | Adjusted HR(95% CI) | <i>p</i> -value |
| Sex (male) | 1.895(1.031-3.483) | 0.039 | 2.380(1.212-4.674) | 0.012 | 1.445(0.990-2.109) | 0.057 | - | - |
| Age (>60 years) | 0.762 (0.418-1.390) | 0.376 | - | - | 1.069(0.734-1.558) | 0.728 | - | - |
| Alcohol (yes) | 0.743(0.229-2.410) | 0.621 | - | - | 1.128(0.654-1.948) | 0.664 | - | - |
| Tobacco (yes) | 0.937(0.334-2.631) | 0.902 | - | - | 1.196(0.712-2.008) | 0.499 | - | - |
| Hypertension (yes) | 0.573(0.241-1.361) | 0.207 | - | - | 0.662(0.370-1.183) | 0.164 | - | - |
| Diabetes (yes) | 1.095(0.487-2.464) | 0.826 | - | - | 0.665(0.323-1.369) | 0.269 | - | - |
| Palliative resection (Yes) | 0.699(0.378-1.292) | 0.254 | - | - | 0.493(0.336-0.723) | <0.001 | 0.351(0.227-0.543) | <0.001 |
| Radio-chemotherapy (Yes) | 0.832(0.419-1.653) | 0.600 | - | - | 0.522(0.356-0.766) | 0.001 | 0.424(0.277-0.648) | <0.001 |
| CEA (>5ng/mL) | 1.701(0.779-3.714) | 0.182 | - | - | 1.747(1.052-2.901) | 0.031 | - | - |
| CA199 (>37U/mL) | 2.750(1.362-5.554) | 0.005 | 3.110(1.517-6.376) | 0.002 | 1.726(1.138-2.619) | 0.010 | 1.829(1.194-2.801) | 0.006 |
| PLR(>166.1) | 1.812 (0.523-2.286) | 0.812 | - | - | 0.866(0.546-1.372) | 0.539 | - | - |
| dNLR(>3.7) | 1.008(0.546-1.859) | 0.980 | - | - | 1.265(0.868-1.844) | 0.221 | - | - |
| NLR (>2.9) | 1.305(0.712-2.393) | 0.389 | - | - | 1.287(0.867-1.909) | 0.210 | - | - |
| LMR(>1.5) | 0.834(0.298-2.339) | 0.731 | - | - | 0.737(0.426-1.273) | 0.273 | - | - |
| Fib (>3.9 g/L) | 1.146(0.603-2.176) | 0.677 | - | - | 1.024(0.668-1.570) | 0.912 | - | - |
| Alb (>35.7 g/L) | 1.713 (0.818-3.589) | 0.153 | - | - | 1.075(0.724-1.595) | 0.720 | - | - |
| pAlb (>139.8mg/L) | 0.613(0.252-1.492) | 0.281 | - | - | 0.511(0.257-1.014) | 0.055 | - | - |
| AFR (>9.9) | 1.256 (0.664-2.377) | 0.458 | - | - | 1.049(0.684-1.608) | 0.828 | - | - |
| FPR (>22.8) | 1.265(0.516-3.102) | 0.607 | - | - | 1.904(0.906-4.002) | 0.089 | - | - |

Abbreviation: HR: hazard ratio; CI: confidence interval; Fib: fibrinogen; Alb: albumin; pAlb: pre-Albumin; AFR: albumin to fibrinogen ratio; FPR: fibrinogen to pre-Albumin ratio; PLR: Platelet to lymphocyte ratio, dNLR: derived neutrophil to lymphocyte ratio; NLR: Neutrophil granulocyte to lymphocyte ratio; LMR: lymphocyte to monocyte ratio; CEA: carcinoembryonic antigen; CA199: carbohydrate antigen 19-9; adjusted HR (95%) was adjusted by sex, age, alcohol, tobacco, hypertension, diabetes, palliative resection, radio-chemotherapy, CEA, CA199, PLR, dNLR, NLR, LMR.

Supplementary Table 5. Univariate and multivariate analyses of prognostic factors for 3 years' PFS and OS by Cox regression model in validation cohort.

| Variables | Progression-free survival | | | | Overall survival | | | |
|----------------------------|---------------------------|--------------|-----------------------|---------|---------------------|--------------|-----------------------|--------------|
| | Univariate analysis | | Multivariate analysis | | Univariate analysis | | Multivariate analysis | |
| | Crude HR(95% CI) | p-value | Adjusted HR(95% CI) | p-value | Crude HR(95% CI) | p-value | Adjusted HR(95% CI) | p-value |
| Sex (male) | 1.051(0.631-1.752) | 0.847 | - | - | 1.029(0.568-1.865) | 0.925 | - | - |
| Age (>60 years) | 1.024(0.594-1.765) | 0.932 | - | - | 0.957(0.376-2.435) | 0.926 | - | - |
| Alcohol (yes) | 0.559(0.223-1.401) | 0.214 | - | - | 0.950(0.374-2.414) | 0.914 | - | - |
| Tobacco (yes) | 0.872 (0.430-1.772) | 0.706 | - | - | 1.379(0.681-2.793) | 0.372 | - | - |
| Hypertension (yes) | 1.467(0.777-2.767) | 0.237 | - | - | 1.840(0.926-3.657) | 0.082 | - | - |
| Diabetes (yes) | 1.593 (0.491-5.173) | 0.438 | - | - | 2.651(0.933-7.533) | 0.067 | - | - |
| Primary side(Right) | 0.608(0.355-1.041) | 0.070 | - | - | 0.718(0.388-1.330) | 0.292 | - | - |
| Palliative resection (Yes) | 0.688(0.415-1.139) | 0.146 | - | - | 0.368(0.197-0.688) | 0.002 | 0.328(0.160-0.670) | 0.002 |
| CEA (>5ng/mL) | 1.616(0.859-3.037) | 0.136 | - | - | 2.433(1.127-5.252) | 0.024 | 3.242(1.385-7.586) | 0.007 |
| CA199 (>37U/mL) | 1.244(0.689-2.244) | 0.469 | - | - | 1.604(0.798-3.224) | 0.185 | - | - |
| PLR(>166.1) | 1.724(1.021-2.911) | 0.042 | - | - | 1.540(0.840-2.826) | 0.163 | - | - |
| dNLR(>3.7) | 1.518(0.914-2.521) | 0.107 | - | - | 1.750(0.962-3.185) | 0.067 | - | - |
| NLR (>2.9) | 1.466(0.884-2.432) | 0.138 | - | - | 1.536(0.842-2.801) | 0.162 | - | - |
| LMR(>1.5) | 0.965(0.437-2.129) | 0.930 | - | - | 1.274(0.455-3.568) | 0.644 | - | - |
| Fib (>3.9 g/L) | 1.474(0.878-2.474) | 0.142 | - | - | 2.233(1.234-4.414) | 0.009 | 2.498(1.191-5.239) | 0.015 |
| Alb (>35.7 g/L) | 0.977(0.506-1.886) | 0.945 | - | - | 0.593(0.302-1.164) | 0.129 | - | - |
| pAlb (>139.8mg/L) | 0.627(0.337-1.167) | 0.141 | - | - | 0.397(0.176-0.897) | 0.026 | - | - |
| AFR (>9.9) | 0.698(0.412-1.184) | 0.182 | - | - | 0.569(0.302-1.072) | 0.081 | - | - |
| FPR (>22.8) | 1.914(1.022-3.583) | 0.042 | - | - | 4.473(1.648-12.141) | 0.003 | 4.206(1.159-15.266) | 0.029 |

Abbreviation: HR: hazard ratio; CI: confidence interval; Fib: fibrinogen; Alb: albumin; pAlb: pre-Albumin; AFR: albumin/fibrinogen ratio; FPR: fibrinogen/pre-Albumin ratio; PLR: Platelet/lymphocyte ratio, dNLR: derived neutrophil to lymphocyte ratio; NLR: Neutrophil granulocyte/lymphocyte ratio; LMR: lymphocyte/monocyte ratio; CEA: carcinoembryonic antigen; CA199: carbohydrate antigen 19-9; adjusted HR (95%) was adjusted by sex, age, alcohol, tobacco, hypertension, diabetes, primary side, palliative resection, CEA, CA199, PLR, dNLR, NLR, LMR.

Supplementary Table 6. Univariate and multivariate analyses of prognostic factors for 3 years' PFS and OS by Cox regression model in left-sided mCRC patient in validation cohort.

| Variables | Progression-free survival | | | | Overall survival | | | |
|----------------------------|---------------------------|-----------------|-----------------------|-----------------|---------------------|-----------------|-----------------------|-----------------|
| | Univariate analysis | | Multivariate analysis | | Univariate analysis | | Multivariate analysis | |
| | Crude HR(95% CI) | <i>p</i> -value | Adjusted HR(95% CI) | <i>p</i> -value | Crude HR(95% CI) | <i>p</i> -value | Adjusted HR(95% CI) | <i>p</i> -value |
| Sex (male) | 1.286(0.647-2.556) | 0.347 | - | - | 0.964(0.457-2.035) | 0.924 | - | - |
| Age (>60 years) | 1.359(0.520-3.551) | 0.532 | - | - | 1.513(0.641-3.572) | 0.345 | - | - |
| Alcohol (yes) | 0.744(0.225-1.461) | 0.628 | - | - | 1.430(0.428-4.778) | 0.561 | - | - |
| Tobacco (yes) | 1.386 (0.596-3.226) | 0.448 | - | - | 1.871(0.821-4.265) | 0.136 | - | - |
| Hypertension (yes) | 0.548(0.186-1.612) | 0.275 | - | - | 1.045(0.396-2.758) | 0.929 | - | - |
| Diabetes (yes) | 1.607 (0.376-6.870) | 0.522 | - | - | 3.382(0.969-11.805) | 0.056 | - | - |
| Palliative resection (Yes) | 0.387(0.186-0.803) | 0.011 | 0.186(0.064-0.542) | 0.002 | 0.389(0.179-0.844) | 0.017 | 0.421(0.181-0.977) | 0.044 |
| CEA (>5ng/mL) | 1.344(0.506-3.568) | 0.553 | - | - | 2.049(0.746-5.626) | 0.164 | - | - |
| CA199 (>37U/mL) | 1.139(0.519-2.150) | 0.745 | - | - | 1.196(0.528-2.711) | 0.668 | - | - |
| PLR(>166.1) | 0.868(0.440-1.713) | 0.683 | - | - | 1.111(0.527-2.341) | 0.781 | - | - |
| dNLR(>3.7) | 1.089(0.529-2.241) | 0.818 | - | - | 1.237(0.583-2.624) | 0.580 | - | - |
| NLR (>2.9) | 1.221(0.610-2.445) | 0.574 | - | - | 1.060(0.503-2.233) | 0.878 | - | - |
| LMR(>1.5) | 2.936(0.689-12.506) | 0.145 | - | - | 1.831(0.433-7.736) | 0.411 | - | - |
| Fib (>3.9 g/L) | 1.348(0.675-2.693) | 0.348 | - | - | 2.616(1.092-6.265) | 0.031 | 2.960(1.071-8.180) | 0.036 |
| Alb (>35.7 g/L) | 1.431(0.544-3.768) | 0.468 | - | - | 0.387(0.164-0.915) | 0.031 | 0.115(0.028-0.467) | 0.003 |
| pAlb (>139.8mg/L) | 0.534(0.222-1.283) | 0.160 | - | - | 0.382(0.127-1.148) | 0.087 | - | - |
| AFR (>9.9) | 0.735(0.361-1.497) | 0.397 | - | - | 0.520(0.227-1.190) | 0.122 | - | - |
| FPR (>22.8) | 1.420(0.616-3.276) | 0.410 | - | - | 4.112(1.126-15.015) | 0.032 | - | - |

Abbreviation: HR: hazard ratio; CI: confidence interval; Fib: fibrinogen; Alb: albumin; pAlb: pre-Albumin; AFR: albumin/fibrinogen ratio; FPR: fibrinogen/pre-Albumin ratio; PLR: Platelet/lymphocyte ratio, dNLR: derived neutrophil to lymphocyte ratio; NLR: Neutrophil granulocyte/lymphocyte ratio; LMR: lymphocyte/monocyte ratio; CEA: carcinoembryonic antigen; CA199: carbohydrate antigen 19-9; adjusted HR (95%) was adjusted by sex, age, alcohol, tobacco, hypertension, diabetes, palliative resection, CEA, CA199, PLR, dNLR, NLR, LMR.

Supplementary Table 7. Univariate and multivariate analyses of prognostic factors for 3 years' PFS and OS by Cox regression model in right-sided mCRC patient in validation cohort.

| Variables | Progression-free survival | | | | Overall survival | | | |
|----------------------------|---------------------------|-----------------|-----------------------|-----------------|---------------------|-----------------|-----------------------|-----------------|
| | Univariate analysis | | Multivariate analysis | | Univariate analysis | | Multivariate analysis | |
| | Crude HR(95% CI) | <i>p</i> -value | Adjusted HR(95% CI) | <i>p</i> -value | Crude HR(95% CI) | <i>p</i> -value | Adjusted HR(95% CI) | <i>p</i> -value |
| Sex (male) | 0.783(0.334-1.836) | 0.574 | - | - | 1.059(0.384-1.914) | 0.912 | - | - |
| Age (>60 years) | 1.154(0.516-2.581) | 0.728 | - | - | 0.713(0.259-1.967) | 0.514 | - | - |
| Alcohol (yes) | 0.471(0.110-2.018) | 0.628 | - | - | 0.757(0.172-3.140) | 0.714 | - | - |
| Tobacco (yes) | 0.471 (0.110-.018) | 0.310 | - | - | 0.757(0.172-3.140) | 0.714 | - | - |
| Hypertension (yes) | 3.233(1.156-9.042) | 0.025 | - | - | 3.506(1.265-9.715) | 0.016 | - | - |
| Diabetes (yes) | 1.664 (0.216-12.822) | 0.625 | - | - | 1.523(0.198-11.701) | 0.686 | - | - |
| Palliative resection (Yes) | 0.924(0.414-2.060) | 0.847 | - | - | 0.241(0.077-0.750) | 0.014 | - | - |
| CEA (>5ng/mL) | 1.639(0.636-4.227) | 0.306 | - | - | 2.282 (0.697-7.466) | 0.173 | - | - |
| CA199 (>37U/mL) | 1.549(0.582-4.123) | 0.381 | - | - | 3.287(0.726-14.882) | 0.123 | - | - |
| PLR(>166.1) | 3.892(1.508-10.047) | 0.005 | 3.158(1.086-9.182) | 0.035 | 2.283(0.773-6.747) | 0.135 | - | - |
| dNLR(>3.7) | 2.430(1.012-5.836) | 0.047 | - | - | 3.584(1.129-11.376) | 0.030 | - | - |
| NLR (>2.9) | 2.054(0.856-4.930) | 0.107 | - | - | 3.025(0.948-9.649) | 0.061 | - | - |
| LMR(>1.5) | 0.435(0.136-1.396) | 0.162 | - | - | 0.890(0.201-3.952) | 0.879 | - | - |
| Fib (>3.9 g/L) | 1.859(0.781-4.425) | 0.161 | - | - | 2.106 (0.761-5.828) | 0.152 | - | - |
| Alb (>35.7 g/L) | 0.696(0.251-1.926) | 0.485 | - | - | 0.930(0.299-2.890) | 0.900 | - | - |
| pAlb (>139.8mg/L) | 0.782(0.286-2.140) | 0.632 | - | - | 0.354(0.094-1.333) | 0.125 | - | - |
| AFR (>9.9) | 0.580(0.243-1.385) | 0.220 | - | - | 0.642(0.232-1.775) | 0.393 | - | - |
| FPR (>22.8) | 2.845(0.940-8.615) | 0.064 | - | - | 4.538(0.938-21.958) | 0.060 | - | - |

Abbreviation: HR: hazard ratio; CI: confidence interval; Fib: fibrinogen; Alb: albumin; pAlb: pre-Albumin; AFR: albumin/fibrinogen ratio; FPR: fibrinogen/pre-Albumin ratio; PLR: Platelet/lymphocyte ratio, dNLR: derived neutrophil to lymphocyte ratio; NLR: Neutrophil granulocyte/lymphocyte ratio; LMR: lymphocyte/monocyte ratio; CEA: carcinoembryonic antigen; CA199: carbohydrate antigen 19-9; adjusted HR (95%) was adjusted by sex, age, alcohol, tobacco, hypertension, diabetes, palliative resection, CEA, CA199, PLR, dNLR, NLR, LMR.