

Supplementary Table 1. Independent prognostic factors for colonic adenocarcinoma for
AJCC stages I–III

| Covariate | Reference | Variable | Overall Mortality * | | |
|--------------------|-----------------------|-----------------------------|---------------------|-------|-------|
| | | | HR (95% CI) | SE | P† |
| Age | (Continuous variable) | | 1.06 (1.05 to 1.06) | 0.003 | <.001 |
| Race | White | Black | 1.16 (0.96 to 1.41) | 0.10 | .12 |
| | | Other | 0.80 (0.63 to 1.01) | 0.12 | .06 |
| Site | Cecum | Ascending colon | 0.93 (0.79 to 1.10) | 0.09 | .42 |
| | | Descending colon | 1.03 (0.79 to 1.35) | 0.14 | .84 |
| | | Hepatic flexure of colon | 1.41 (1.11 to 1.79) | 0.12 | .005 |
| | | Overlapping lesion of colon | 1.20 (0.79 to 1.84) | 0.22 | .40 |
| | | Sigmoid colon | 1.05 (0.89 to 1.23) | 0.08 | .57 |
| | | Splenic flexure of colon | 1.18 (0.89 to 1.56) | 0.14 | .25 |
| | | Transverse colon | 1.19 (0.97 to 1.45) | 0.10 | .10 |
| C-stage | C0-stage | C1-stage | 1.59 (1.42 to 1.79) | 0.06 | <.001 |
| Histological Grade | Well-Differentiated | Moderately differentiated | 1.23 (0.97 to 1.56) | 0.12 | .09 |
| | | Poorly differentiated | 1.50 (1.16 to 1.93) | 0.13 | .002 |
| | | Undifferentiated | 1.52 (0.95 to 2.44) | 0.24 | .08 |
| AJCC stage | Stage I | IIA | 1.17 (0.96 to 1.42) | 0.10 | .12 |
| | | IIB | 2.06 (1.50 to 2.84) | 0.16 | <.001 |
| | | IIC | 2.20 (1.55 to 3.11) | 0.18 | <.001 |

| | | | | | |
|----------------|------------------------|--------------------|---------------------|------|-------|
| | | IIIA | 1.11 (0.75 to 1.66) | 0.20 | .60 |
| | | IIIB | 1.92 (1.58 to 2.33) | 0.10 | <.001 |
| | | IIIC | 4.07 (3.26 to 5.08) | 0.11 | <.001 |
| Radiation | None | Performed | 1.19 (0.80 to 1.77) | 0.20 | .39 |
| Surgery | None | Local excision | 0.36 (0.16 to 0.81) | 0.41 | .01 |
| | | Surgical resection | 0.18 (0.12 to 0.27) | 0.22 | <.001 |
| Marital Status | Single (never married) | Estranged | 0.76 (0.59 to 0.97) | 0.13 | .03 |
| | | Married | 0.59 (0.50 to 0.71) | 0.09 | <.001 |
| | | Widowed | 0.65 (0.53 to 0.79) | 0.10 | <.001 |

* Multivariable analysis using Cox proportional hazards model of all independent prognostic factors affecting overall mortality at median follow-up of 27 months among AJCC stage I – III patients, diagnosed in 2004 in the SEER17 registries, after application of inclusion and exclusion criteria (n = 6,644). Models were stratified by radiation therapy covariate. The registry in which the patient was registered was also used as a covariate. None of the SEER 17 registries emerged as an independent prognostic factor ($P > .05$). HR = Hazard Ratio; CI = Confidence Interval; SE = Standard Error; SEER = Surveillance, Epidemiology and End Results; AJCC = American Joint Committee on Cancer; C0-stage = normal carcinoembryonic antigen level; C1-stage = elevated carcinoembryonic antigen level. Numbers may not equal the sample size of the final analytic cohort because of missing data on some of the covariates.

† Two-sided P values were calculated using log-rank test.

‡ Per AJCC Staging Manual (7th edition, 2010) (1).

Supplementary Table 2. Multivariable analysis to identify independent prognostic factors for colonic adenocarcinoma, using availability of C-stage information as one of the covariates

| Covariate | Reference | Variable | Overall Mortality * | | |
|--------------------|---------------------|---------------------------|---------------------|-------|-------|
| | | | HR (95% CI) | SE | P † |
| Age | | (Continuous variable) | 1.04 (1.04 to 1.04) | 0.001 | <.001 |
| Race | White | Black | 1.12 (1.02 to 1.24) | 0.05 | .02 |
| | | Other | 0.96 (0.84 to 1.10) | 0.07 | .59 |
| Origin | Non-Hispanic | Hispanic | 1.05 (0.93 to 1.18) | 0.06 | .43 |
| Site | Cecum | Ascending colon | 0.91 (0.83 to 0.99) | 0.05 | .04 |
| | | Descending colon | 0.95 (0.83 to 1.09) | 0.07 | .46 |
| | | Hepatic flexure | 1.10 (0.96 to 1.25) | 0.07 | .18 |
| | | Overlapping lesion | 1.24 (1.03 to 1.49) | 0.09 | .02 |
| | | Sigmoid colon | 0.84 (0.78 to 0.91) | 0.04 | <.001 |
| | | Splenic flexure | 1.04 (0.90 to 1.21) | 0.08 | .58 |
| | | Transverse colon | 1.10 (0.99 to 1.23) | 0.06 | .08 |
| C-stage | Not available | Available | 0.88 (0.83 to 0.93) | 0.03 | <.001 |
| Histological Grade | Well-Differentiated | Moderately differentiated | 1.26 (1.11 to 1.43) | 0.07 | <.001 |
| | | Poorly differentiated | 1.73 (1.51 to 1.98) | 0.07 | <.001 |
| | | Undifferentiated | 1.20 (1.57 to 2.54) | 0.12 | <.001 |
| AJCC Staging ‡ | Stage I | IIA | 1.35 (1.19 to 1.53) | 0.07 | <.001 |
| | | IIB | 2.43 (1.96 to 3.02) | 0.11 | <.001 |
| | | IIC | 3.15 (2.53 to 3.92) | 0.11 | <.001 |
| | | IIIA | 1.13 (0.86 to 1.50) | 0.14 | .39 |
| | | IIIB | 2.12 (1.87 to 2.41) | 0.07 | <.001 |
| | | IIIC | 4.59 (3.97 to 5.31) | 0.07 | <.001 |

| Covariate | Reference | Variable | Overall Mortality * | | |
|-------------------------|------------------------|--------------------------------|-----------------------|------|-------|
| | | | HR (95% CI) | SE | P † |
| | | IV | 10.42 (9.28 to 11.70) | 0.06 | <.001 |
| Surgery | None | Local excision | 0.51 (0.38 to 0.70) | 0.16 | <.001 |
| | | Surgical resection | 0.41 (0.37 to 0.45) | 0.05 | <.001 |
| Marital Status | Single (never married) | Separated | 0.88 (0.77 to 0.99) | 0.06 | .04 |
| | | Married | 0.70 (0.64 to 0.77) | 0.05 | <.001 |
| | | Widowed | 0.79 (0.71 to 0.88) | 0.05 | <.001 |
| Regional SEER Registry | Alaska Natives | Atlanta (Metropolitan) | 1.79 (0.57 to 5.68) | 0.59 | .32 |
| | | California excluding SF/SJM/LA | 1.72 (0.55 to 5.38) | 0.58 | .35 |
| | | Connecticut | 1.45 (0.46 to 4.56) | 0.59 | .53 |
| | | Detroit (Metropolitan) | 1.76 (0.56 to 5.53) | 0.59 | .34 |
| | | Hawaii | 1.48 (0.47 to 4.69) | 0.59 | .51 |
| | | Iowa | 1.60 (0.51 to 5.02) | 0.59 | .43 |
| | | Kentucky | 2.09 (0.67 to 6.57) | 0.58 | .21 |
| | | Los Angeles | 1.72 (0.55 to 5.38) | 0.58 | .35 |
| | | Louisiana | 1.98 (0.63 to 6.21) | 0.58 | .24 |
| | | New Jersey | 1.61 (0.51 to 5.05) | 0.58 | .41 |
| | | New Mexico | 1.63 (0.51 to 5.19) | 0.59 | .41 |
| | | Rural Georgia | 1.27 (0.34 to 4.74) | 0.67 | .72 |
| | | San Francisco to Oakland SMSA | 1.60 (0.51 to 5.02) | 0.58 | .42 |
| | | San Jose - Monterey | 1.13 (0.35 to 3.59) | 0.59 | .84 |
| Seattle (Puget - Sound) | 1.69 (0.54 to 5.31) | 0.59 | .37 | | |
| Utah | 1.98 (0.62 to 6.32) | 0.59 | .25 | | |

* Multivariable analysis using Cox proportional hazards model of all independent prognostic factors affecting overall mortality at median follow-up of 27 months for all patients diagnosed in 2004 in the SEER 17 registries, after application of inclusion and exclusion criteria (N = 17,910 patients), including those with unavailable C-stage information (n = 8827 patients). Models were stratified by radiation therapy covariate. The registry in which the patient was registered was also used as a covariate. Numbers may not equal the sample size of the final analytic cohort because of missing data on some of the covariates. HR = Hazard Ratio; CI = Confidence Interval; SE = Standard Error; SEER = Surveillance, Epidemiology and End Results. AJCC = American Joint Committee on Cancer, SF = San Francisco, SJM = San Jose Monterey, LA = Los Angeles; SMSA = Standard Metropolitan Statistical Area.

† Two-sided *P* values were calculated using log-rank test.

‡ Per AJCC Staging Manual (7th edition, 2010) (1).

Reference

1. Edge SB, Byrd DR, Compton CC ea. American Joint Committee on Cancer Cancer Staging Manual, 7th ed, (Eds), Springer, New York 2010.