ADJUVANT CHEMOTHERAPY AND OVERALL SURVIVAL IN HIGH RISK STAGE II COLON CANCER
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Aim: Patients with stage II colon cancer are considered high risk in case of pathological T4 (pT4), poor or undifferentiated grade, emergency surgery, <10 lymph nodes (LNs) evaluated and/or vascular invasion, and therefore candidates for adjuvant chemotherapy (CT). We evaluated to what extent patients received CT and how this affected overall survival (OS).

Methods: All patients with high risk stage II colon cancer diagnosed in the area of the Eindhoven Cancer Registry between 2008-2012 were included. Vascular invasion was not included. Multivariable logistic regression was used to assess the association between high risk factors and CT administration. 3-year OS according to CT was based on Kaplan-Meier curves and Cox regression was used to discriminate the independent effect of CT on the risk of death. A subsample was created using propensity score matching (PSM) in which patients who did not receive CT were matched to patients who did.

Results: 922 patients were identified of whom 151 (16%) received CT. In multivariable analysis, patients were more likely to receive CT in case of a pT4 tumor (n = 188) (pT4 vs. pT3 30 vs. 11%, OR 4.82, 95% CI 3.04-7.65), <10 LNs evaluated (n = 358) (<10 vs. ≥10 14 vs. 18%, OR 1.92, 95% CI 1.18-3.14) and patients needing emergency surgery (n = 148) as opposed to elective surgery (21 vs. 15%, OR 1.91, 95% CI 1.15-3.18). Differentiation grade did not influence CT receipt; age and SES did. Crude 3-year OS was higher among patients receiving CT as compared to no CT (90% vs. 72%, p < 0.0001). Patients receiving CT had a decreased risk of death compared to patients not receiving CT (adjusted HR 0.37, 95% CI 0.22-0.61). Similar effects of CT were found in subgroups of patients with pT4, <10 LNs examined and emergency surgery (the latter only when patients dying within 30 days after surgery were included). In the PSM sample (n = 270), a similar effect of CT on risk of death was found (HR 0.35, 95% CI 0.19-0.64).

Conclusions: Most high risk factors were associated with increased use of CT, although the absolute proportion of CT given was low. In this observational study CT receipt was associated with improved OS. Future studies should focus on how quality of life is affected by CT and what influence this has on choice of treatment.

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