

# Grade III-IV toxicities among elderly stage III colon cancer patients receiving CAPOX or capecitabine

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## Objective

The aim of the current study is to investigate the prevalence of grade III-IV toxicities among elderly stage III colon cancer patients receiving adjuvant chemotherapy comprising of capecitabine and oxaliplatin (CAPOX) or capecitabine monotherapy (CapMono) and to determine the influence of these toxicities on treatment intensity.

## Methods

### Study population

- Stage III (pT1-4N1-2M0) colon cancer patients aged  $\geq 70$  years
- Diagnosed in the southeastern Netherlands between 2005-2012
- Treated with chemotherapy comprising of CAPOX or CapMono
- Data originate from the Netherlands Cancer Registry

### Statistical analyses

- For toxicity grading, Common Terminology Criteria for Adverse Events version 4.0 were used.
- Grade III-IV toxicities that appeared in  $>5\%$  of patients were reported and investigated whether these toxicities were related to treatment characteristics using  $\chi^2$ -tests and Wilcoxon Rank-Sum tests.

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## Results

- 193 patients received CAPOX, 164 patients received CapMono.
- The proportion of patients with grade III-IV toxicities was higher among CAPOX (80%) than among CapMono (51%,  $p < 0.0001$ , table 1). The most common toxicities per regimen are listed table 1.
- For CAPOX, patients with diarrhea or vomiting/nausea less often completed all planned cycles as compared to patients without these toxicities (10% vs. 39%,  $p = 0.0006$  and 10% vs. 35%,  $p = 0.017$ ).
- Figure 1 shows dosages received for each chemotherapeutic agent according to the presence of toxicities that were associated with dosage. Median total dosage (MDT) of capecitabine within CAPOX was lower for patients with diarrhea ( $p < 0.0001$ ), vomiting/nausea ( $p = 0.0001$ ), and hypokalemia ( $p = 0.0002$ ) but higher for patients with neurological complications ( $p = 0.038$ ) (figure 1A). MDT of oxaliplatin was lower for patients with diarrhea ( $p < 0.0001$ ), vomiting/nausea ( $p = 0.001$ ) and hypokalemia ( $p = 0.011$ ) (figure 1B). For CapMono, MDT was lower for patients with diarrhea ( $p = 0.005$ ) (figure 1C).

## Conclusions

- A large majority of elderly treated with CAPOX and half of elderly treated with CapMono developed grade III-IV toxicities, which had a pronounced impact on treatment completion and dosage.
- In this light, CapMono seems preferable over CAPOX, but effects on quality of life and survival should be taken into account.

**Table 1**  
Number and type of grade III-IV toxicities according to adjuvant chemotherapy regimen among elderly stage III colon cancer patients

CAPOX (n=193)	CapMono (n=164)
Number of toxicities	Number of toxicities
39 (20%) none	80 (49%) none
61 (32%) 1	51 (31%) 1
42 (22%) 2	22 (13%) 2
51 (26%) $\geq 3$	11 (7%) $\geq 3$
Type of toxicities	Type of toxicities
40 (21%) Diarrhea	28 (17%) Dermatological compl.
21 (11%) Neurological compl.	14 (9%) Diarrhea
21 (11%) Vomiting/nausea	11 (7%) Fatigue
16 (8%) Thrombocytopenia	
15 (8%) Hypokalemia	

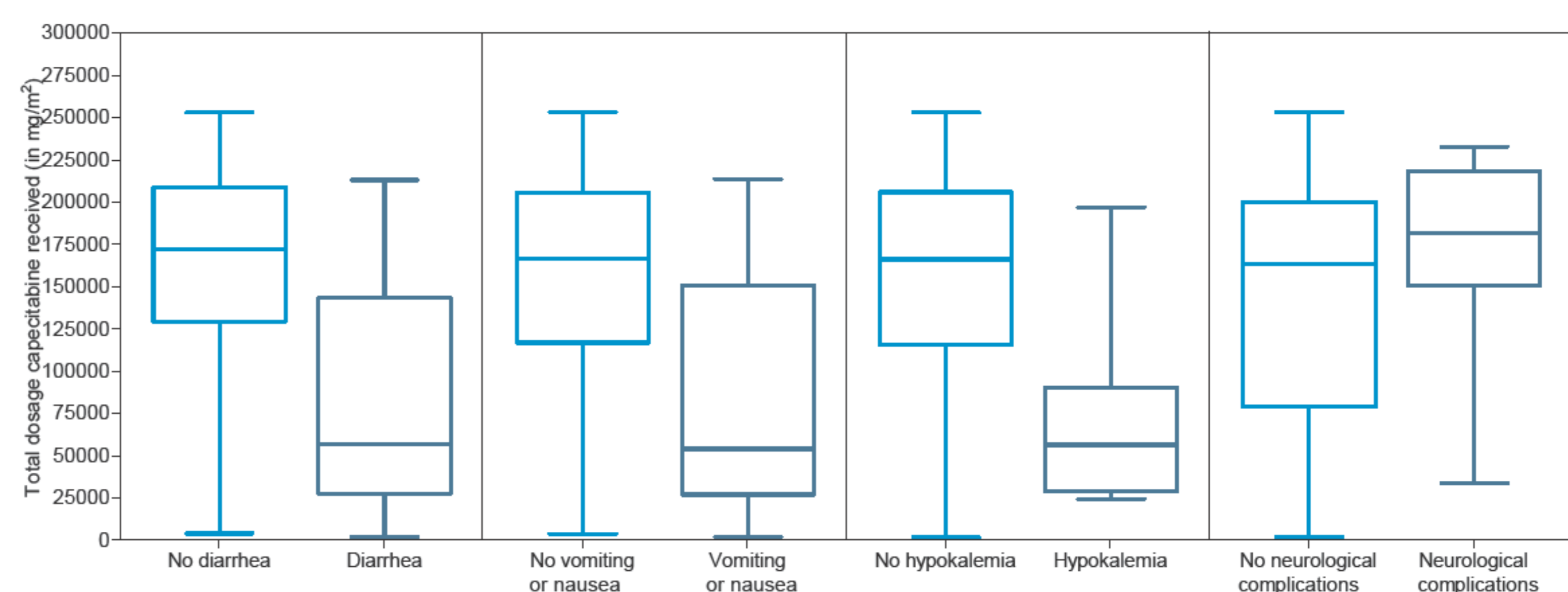


Figure 1A Grade III-IV toxicities and total dosage capecitabine received within the CAPOX regimen among elderly stage III colon cancer patients

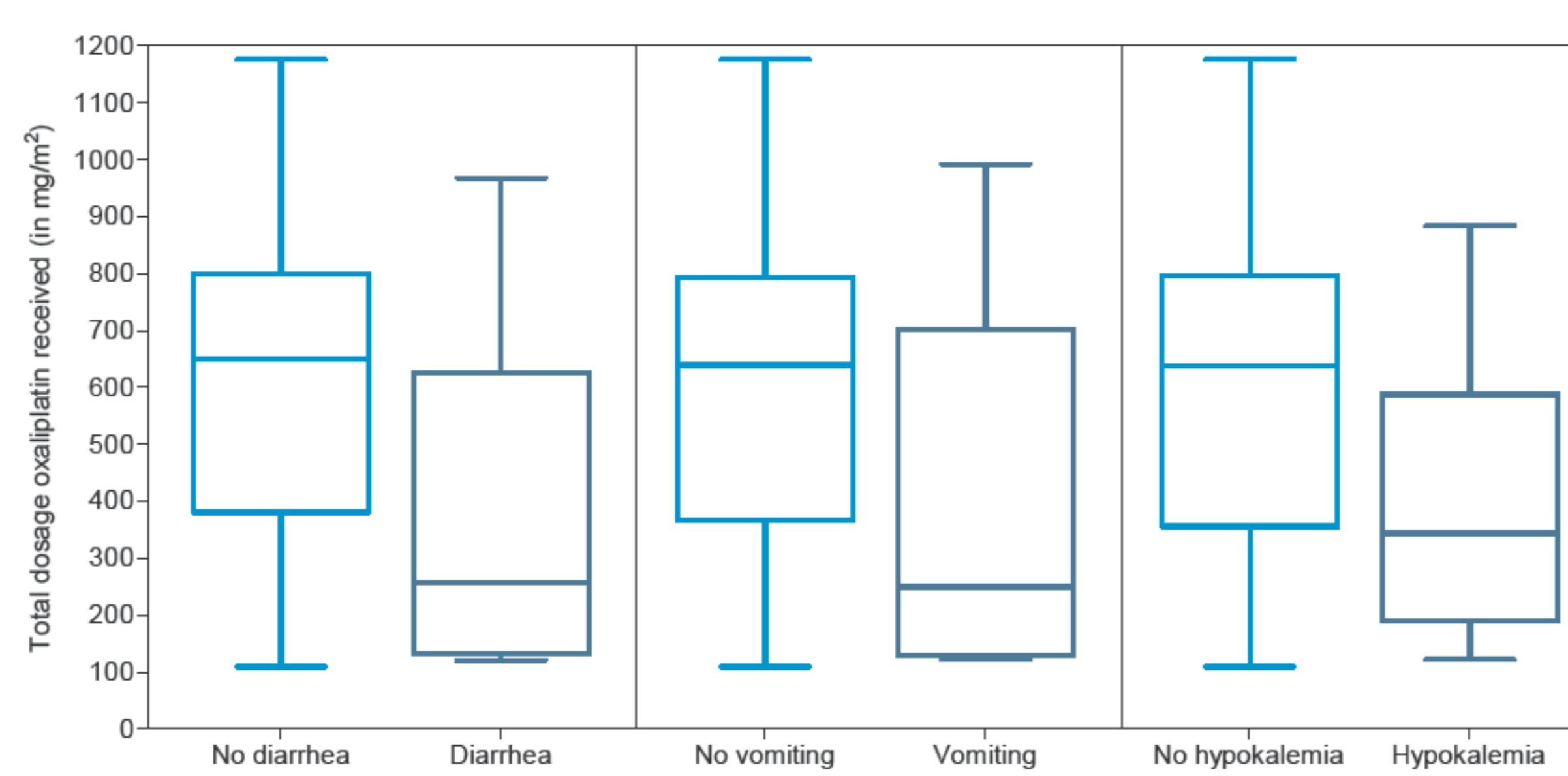


Figure 1B Grade III-IV toxicities and total dosage oxaliplatin received within the CAPOX regimen among elderly stage III colon cancer patients

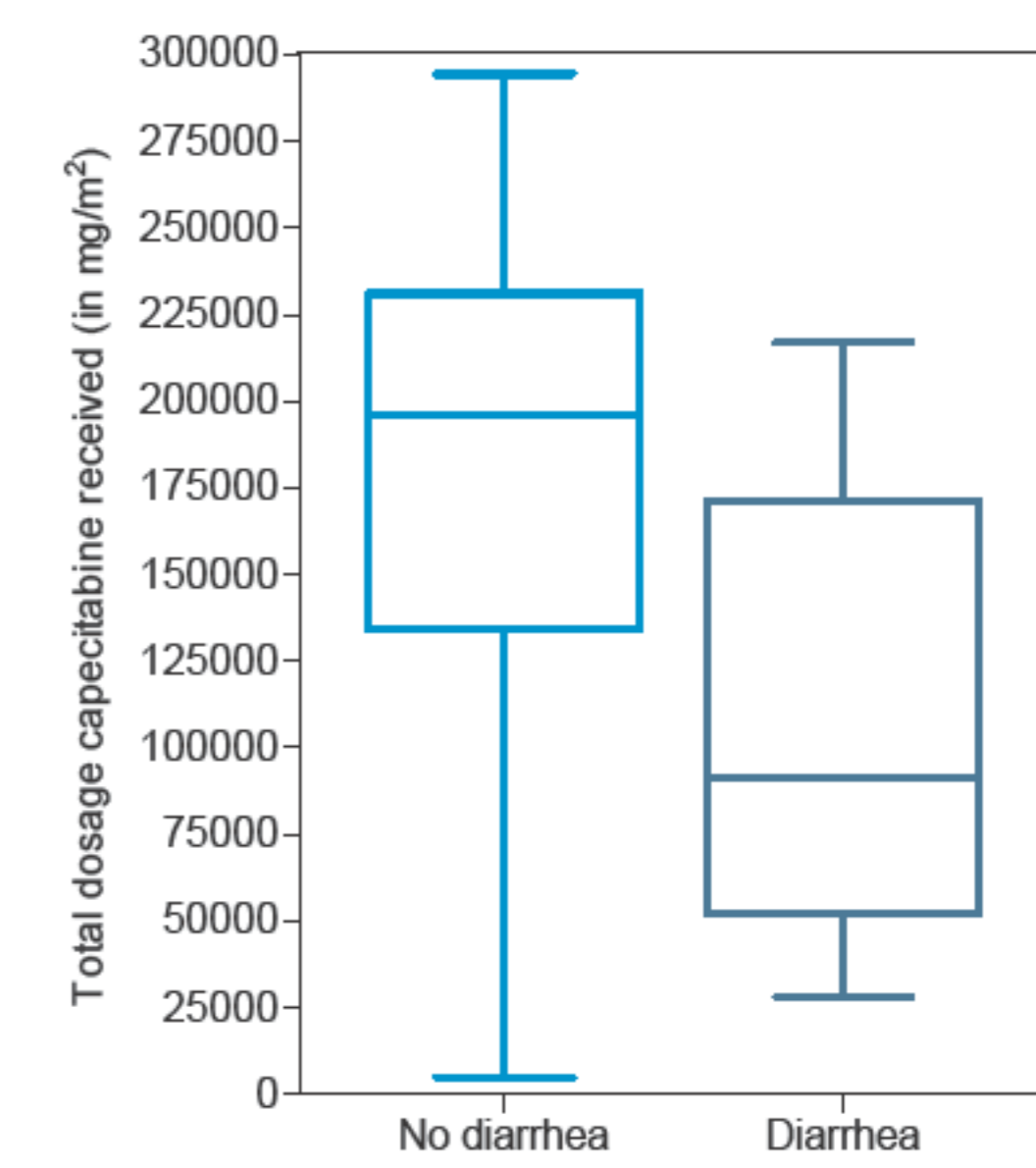


Figure 1C Grade III-IV toxicities and total dosage capecitabine received within the CapMono regimen among elderly stage III colon cancer patients

This work was supported by:

