# Oxaliplatin for elderly patients: dosing regimens in a German secondary care hospital, safety and quality of life

Goentje-Gesine Marquardt[1,2], , Klaus Meier[1], Dorothee C. Dartsch[2,3]
[1] Dept. of Pharmacy, Heidekreis Klinikum GmbH, Soltau, Germany, [2] Clinical Pharmacy, Institute of Pharmacy, University of Hamburg, Hamburg, Germany, [3] CaP Campus Pharmazie GmbH, Hamburg, Germany

## OBJECTIVES

There are many chemotherapy protocols, e.g. FoLFOx, to guide dosing. However, dose reductions due to severe side effects (ADR) are common and information on the doses really administered is scarce. Our hypothesis was that especially elderly patients receive lower doses than younger ones. The aim of our study was therefore to test this hypothesis and to investigate safety and quality of life (QoL) in elderly patients treated with an oxaliplatin-based chemotherapy (CTx).

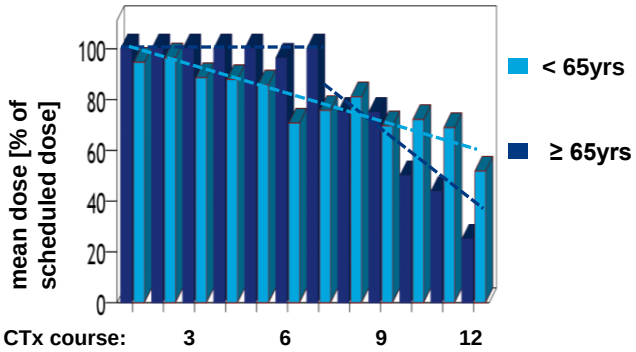
## METHODS

Observational field study with colorectal cancer patients receiving oxaliplatin in the outpatient oncology ward of a German secondary care clinic. Specified labs and ADR (assessed with CTCAEv3.0[1]) as well as self-reported QoL (EORTC QLQ-C30[2]) were obtained by a clinical pharmacist until therapy was ended.

## TABLE 1: Patients

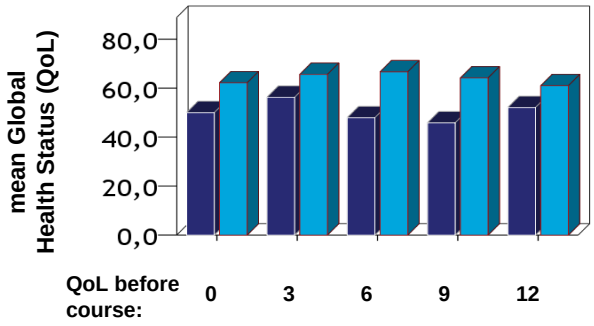
| | age < 65y | age ≥ 65y |
|---|---|---|
| N | 4 | 14 |
| age [mean±SD] | 56.7±8.6 | 74.2±3.7 |
| female sex [N/%] | 1 / 25 | 5 / 36 |
| BMI [kg/m²] | 30.7±4.9 | 26.0±4.4 |
| CTx courses [N] | 48 | 152 |
| mean OXALI dose, cumulative [mg/m²] | 511±48 | 430±138 |
| Hb [g/dl] | 11.5±1.1 | 12.0±1.1 |
| WBC | 10.2±2.7 | 7.7±2.4 |
| platelets | 294.3±68.5 | 234.4±123.7 |
| serum crea [g/dl] | 1.02±0.07 | 0.96±0.16 |
| GFR [ml/min] | 102.4±20.0 | 70.8±17.2 |
| global QoL | 50±37.9 | 62.2±18.5 |

## FIG.1: Oxaliplatin Dose Intensity




Younger patients received 100% of the target oxaliplatin dose until course 7 and linear dose reductions in the following courses, reaching a mean of 25% of the target dose at course 12. 82% of dose reductions were due to neurotoxicity. In contrast, elderly patients received slightly reduced doses right from the beginning, but in spite of further subsequent dose reductions the level stayed above 50% of the target dose. In these patients, neurotoxicity caused 27%, thrombopenia 23% and 'old age' per se 21% of reductions.

## FIG.1: Quality of Life




Self-reported global QoL was lower (by trend) in younger than in elderly patients.

## TABLE 2: maximum toxicity per patient (N)

| toxicity | grade: | none | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| anaemia | < 65 y | - | 3 | 1 | - | - |
| | ≥ 65 y | - | 12 | 2 | - | - |
| leucopenia | < 65 y | 2 | 2 | 0 | - | - |
| | ≥ 65 y | 4 | 6 | 4 | - | - |
| thrombopenia | < 65 y | 2 | 2 | 0 | - | - |
| | ≥ 65 y | 1 | 5 | 8 | - | - |
| nausea | < 65 y | - | - | 1 | 3 | - |
| | ≥ 65 y | 4 | 5 | 5 | - | - |
| vomiting | < 65 y | 1 | 1 | 1 | 1 | - |
| | ≥ 65 y | 9 | 2 | 3 | - | - |
| diarrhea | < 65 y | 1 | 1 | 1 | 1 | - |
| | ≥ 65 y | 1 | 5 | 5 | 1 | 2 |
| mucositits | < 65 y | - | 4 | - | - | - |
| | ≥ 65 y | 3 | 10 | 1 | - | - |
| fever | < 65 y | 3 | - | 1 | - | - |
| | ≥ 65 y | 8 | 3 | 2 | 1 | - |
| neurotoxicity | < 65 y | - | - | - | 3 | 1 |
| | ≥ 65 y | - | 4 | 3 | 6 | 1 |
| infection | < 65 y | 2 | 2 | - | - | - |
| | ≥ 65 y | 11 | 3 | - | - | - |

Predominant ADR in younger patients were neurotoxicity, nausea and vomiting, while elderly patients showed higher degrees of thrombopenia.

## CONCLUSIONS

Oxaliplatin therapy is feasible, with manageable toxicity and acceptable QoL, in elderly patients, as has recently also been shown in the FOCUS-2 trial[3]. It remains to be investigated whether the different dosage time-courses in younger and elderly patients yield differences in outcome .

## LITERATURE

[1]http://ctep.cancer.gov/protocolDevelopment/electronic_applications/docs/ctcaev3.pdf [accessed May15th 2012]
[2]Aaronson NK et al., J Natl Cancer Inst. 1993; 85(5):365-76.
[3]Seymour MT et al., Lancet. 2011; 377(9779):1749-59.