Integration of oral anticancer drugs into standardized computerized physician order entry systems using Capecitabine and Temozolomide as an example

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Background

Oral anticancer drugs are still some of the most critical issues in terms of right application and compliance. Patients need to be advised and guided concerning application schedules, risks and important supportive measures. Package sizes distributed by the pharmaceutical industry often contain more single doses than one patient needs especially for short-term stays in the hospital. Furthermore the quantity and variety of information related to their disease and therapies often overburden patients quite extensively. However the success of an oral anticancer therapy strongly depends on patients´ participation. This implies an intensive education and instruction of patients.

Figure 1+2: Patient-individual portion of daily doses. Label with intake instructions.

Project details

Our goal was to dispense patient-individual unit doses of oral anticancer drugs to in-patient and day care units based on individual computerized prescription.

For this purpose we implemented evidence-based therapy regimens including the concurrent medication in the prescription software to prevent errors and support the use of standardized treatment plans. Additionally patient information leaflets were created for each drug in cooperation with the physicians. The patient information brochure consists of the patient-individual dose and some restricted essential information like the accurate intake of the medication, possible drug interactions and selected adverse events together with recommendations concerning concomitant medication. The first drugs which were implemented have been Capecitabine and Temozolomide.

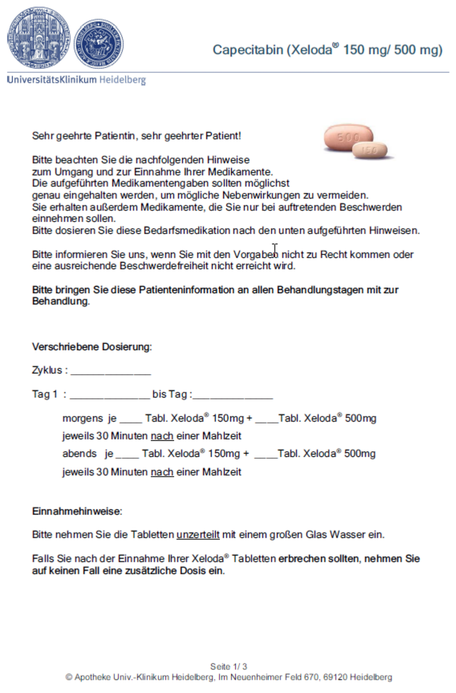

Figure 3: Capecitabine information leaflet.

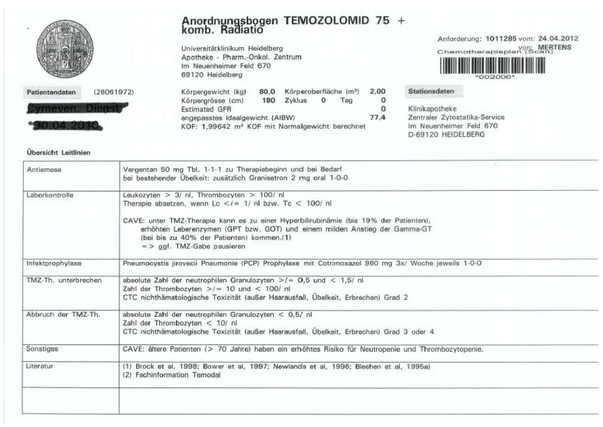

Figure 4:
Standardized treatment plan of “Temozolomide 75 mg in combination with radiation”

Conclusion and Outlook

The patient-individual dispensing of oral anticancer drugs allows more extensive pharmaceutical care of these patients. In view of the risks described above, prescriptions of oral anticancer drugs undergo a pharmaceutical plausibility-check before dispensing and amounts are adapted and delivered according to the patient-individual therapy regimes. Moreover, the available application instructions e.g. therapy schedules including supportive measures and the patient information brochure serve to improve information about and the safe utilization of oral anticancer drugs.

Due to the positive feedback of involved physicians and patients we are convinced to extend the procedure to even more oral anticancer drugs.