This presentation will focus on palliative first line chemotherapy (ChT) in breast, lung, colorectal and prostate cancer. For these tumors there is evidence that first line ChT improves survival in defined subgroups, namely in those patients who would have been eligible for the respective trials. On the other hand very little evidence exists to help us determine the optimal duration of treatment. We all agree that ChT should be given only as long as absolutely required. In the palliative setting a potential benefit of a longer duration of treatment must be weight against potential "costs" which include toxicities, doctor visits and being away from home and work.

In patients, where progressive disease or unacceptable toxicity is observed, treatment must be stopped. The first evaluation of response should be done no later than 6–8 weeks after initiation of treatment. The vast majority of clinical trials which established the use of palliative ChT did not ask how long this treatment should be given in patients whose tumor did not progress. To approach this question we have both results of clinical trials and expert opinion. Few studies have randomized between more or less treatment cycles. Unfortunately it is very difficult to define a reliable endpoint for these trials. Progression-free survival has been shown to be superior in patients with NSCLC receiving 6 as compared to 4 ChT cycles. This endpoint however is insufficient since it does not take into account a rechallenge with the same regimen in those patients experiencing a prolonged time to progression. Also the recommendation to give two more cycles after having achieved a partial remission is not evidence-based.

Considering the limited life expectancy of these patients it has been our policy to restrict first line treatment to four three week cycles in lung cancer and to 4-6 in breast, colorectal and prostate cancer. Then give the patients a break and rechallenge them once the tumor is clearly progressing or symptomatic unless the interval is too short. This may allow to give more of the drugs causing cumulative toxicities like platinum analogues, taxoids and anthracyclins. It is important to continuously discuss all associated issues with fully informed patients and their relatives. Future clinical trials will have to use more comprehensive endpoints.

Disclosure: The author has declared no conflicts of interest.