Health resource consumption and costs attributable to chemotherapy-induced toxicity in German routine hospital care in lymphoproliferative disorder and NSCLC patients.

Multidrug chemotherapy (CT) is still associated with relevant side-effects. We assessed, under current practice patterns, frequency and severity of CT-induced toxicity and its economic consequences. Prospective, multicentre, longitudinal, observational cohort study with lymphoproliferative disorder (LPD) and non-small-cell lung cancer (NSCLC) patients, receiving first- or second-line (immuno-) CT (excluding myeloablative CT). Data were collected from patient interviews and preplanned chart reviews. Costs in 2007 euros are presented from the provider perspective. Two hundred and seventy-three patients (n = 153 LPD; n = 120 NSCLC) undergoing a total of 1004 CT cycles were assessable (age >=65 years, 40%; female, 36%; Eastern Cooperative Oncology Group performance status >=2, 11%; tumour stage >=III, 56%; history of comorbidity, 80%). Fifty percent of cycles were associated with grade 3/4 toxicity and 37% (n = 371) with at least one hospital stay (outpatient/day care n = 154; intensive care n = 19). Mean toxicity-related costs amounted to EUR1032 (EUR86) per cycle. Costs rose exponentially with the number of grade 3/4 adverse drug reactions (ADRs) and were highest in cycles affected by more than four ADRs, EUR10 881 (EUR5455); in cycles with intensive
care, EUR14 121 (EUR8833); and in cycles affected by grade 3/4 infections and febrile neutropenia/leukopenia, EUR7093 (EUR4531) and EUR5170 (EUR2899), respectively. Five percent of CT cycles accounted for 56% of total expenses. Individualised supportive care strategies are needed. Future research should focus on identifying toxicity clusters and patient characteristics predictive for high costs.