

Impact of chemotherapy-induced neutropenia on quality of life: a prospective pilot investigation

Fortner BV *et al. Support Care Cancer* 2005; **13**: 522-528

There is little empirical evidence of the impact of CT, particularly CIN, on quality of life (QoL). This prospective, single-centre, single-arm, observational study investigated the relationship between QoL and grade 4 CIN during the first cycle of myelosuppressive CT.

Patients were assessed on days 0, 7, 14 and 21 of their first CT cycle. QoL was assessed using 19 scales within 4 tools: the Medical Outcomes Study SF-36 health survey, the Cancer Care Monitor (CCM), the Hospital Anxiety and Depression Scale (HADS), and the Psychosocial Adjustment to Illness Scale-Self Report (PAIS-SR). The change of each measure from baseline until the end of each week was modelled using generalized estimating equations.

Of 71 patients evaluated, 33 experienced grade 4 neutropenic events (NEs) with 14 episodes (20% of patients) in week 1, 25 (35%) in week 2 and 1 (1%) in week 3. Although 2 patients experienced FN, no patients were hospitalised for FN. Of the 19 scales used to measure changes in QoL, 3 measures were significantly less favourable for patients who experienced grade 4 neutropenia in the past 7 days than for patients with grade 0-3 neutropenia. These scales were bodily pain (SF-36; $P = 0.01$), anxiety (HADS; $P = 0.03$) and social environment (PAIS; $P = 0.04$). All three changes were clinically significant.

Although the correlations observed in this study do not establish a causative effect of neutropenia on QoL, these data suggest that patients who experience grade 4 neutropenia (without FN) have poorer outcomes with respect to pain, anxiety and social contact. QoL may be adversely affected for up to 7 days after the event.

<http://www.ncbi.nlm.nih.gov/pubmed/15678345?dopt=Citation>