

The association between age and gender with health related quality of life for cancer patients stratified by disease severity: a meta-analysis of randomized controlled trials.

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Objectives: The objective of this analysis was to investigate the influence of age and gender on Health Related Quality of Life (HRQOL) scores, as evaluated by the European Organisation for Research and Treatment of Cancer (EORTC) QLQ-C30, in a subset of metastatic and non metastatic cancer patients.

Methods: Pre-treatment HRQOL was measured in closed EORTC Randomized Controlled Trials on a set of 15 EORTC QLQ-C30 scales; Global health status (QL), Physical functioning (PF), Role functioning (RF), Emotional functioning (EF), Cognitive functioning (CF), Social functioning (SF), Fatigue (FA), Nausea and Vomiting (NV), Pain (PA), Dyspnea (DY), Insomnia (SL), Appetite loss (AP), Constipation (CO), Diarrhea (DI) and Financial Difficulties (FI). For each scale, a linear mixed model was fitted for metastatic and non metastatic cancer patients to investigate the significance ($p < .05$) of age (<40, 40-49, 50-59, 60-69, 70-79, ≥ 80) and gender (men vs women) after correction for country and cancer site.

Results: The sample included 6,862 patients from 15 countries over 11 cancer sites. Age was significant in non metastatic patients for PF, RF, CO, FI (all p 's $< .02$) and in metastatic patients for SF, PA, SL and FI (all p 's $< .001$). Older people reported, except for NV, higher level of symptoms. For the functional scales a constant pattern was found across age categories. Gender was significant in non metastatic patients for QL, SF, PF, RF, CF, FA, NV, PA, SL, AP, CO (all p 's ≤ 0.001) and in metastatic patients for PF, CF, FA, NV, AP, DI and FI (all p 's $< .04$). Except for DY, women reported higher level of symptoms and a lower functioning and global health status compared to men.

Conclusions: Age and gender are strongly linked with HRQOL status of cancer patients, but the relationship depends on the disease stage. Our large sample supports for smaller past studies which found similar effects.