The Rockwood Geriatric Clinical Frailty Scale is a more discriminatory tool for assessing older cancer patients compared with standard oncology performance status scales

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Background
Over recent years there has been an emphasis on improving assessment, treatment and outcomes for older patients with cancer. A common theme is accurate and reliable assessment of frailty and comorbidities at diagnosis, which can constructively inform decision making regarding treatment. Performance status scales are routinely used to assess cancer patients for treatment and disease monitoring. The ECOG and Karnofsky Performance Status (PS) scales are commonly used, but are problematic to use in older people as their accuracy in this age group has not been evaluated. In the context of an ageing population with increasing cancer incidence, there is an urgent need for better tools to aid clinical decision making. Comprehensive Geriatric Assessment (CGA) has been evaluated in older cancer patients, but is time-consuming and difficult to perform in current outpatient settings. The Rockwood clinical frailty scale (CFS) is established in geriatric medicine as a quick and easy 9 point frailty scale and has been shown to predict for mortality as well as inpatient length of stay. It has not been evaluated in a cancer setting. We sought to compare the use of CFS with ECOG and Karnofsky PS to assess cancer patients attending routine outpatient clinics.

Methods:
Doctors seeing patients in pancreaticobiliary and melanoma clinics in our institution were provided with access to the CFS, ECOG and Karnofsky PS on the hospital’s electronic medical record system. Electronic data of the scale readings recorded by doctors at clinic visits was extracted and analysed for patients <70 or ≥70 years old. Data was analysed for the period 1/7/16 – 30/11/16. As most of these patients would fall into the category of terminally ill (CFS score 9) ordinarily, scorers were advised to score from 1-8 based on frailty rather than prognosis.

Results:
Between 1/7/2016 and 30/11/16, 114 patients had all 3 scales recorded at the same clinic visit 332 times. Age range was 22–88 years with a median age of 64 years. Based on the worst status recorded for an individual patient for each of the 3 scales, the distribution of ECOG PS scores did not differ between patients below and above 70 years (p=0.31), Karnofsky PS scores did differ (p=0.02), while CFS scores differed the most (p=0.0056). Concordance between the 3 scales was lower for the older age group. Concordances (weighted Kappa) between the 3 scales for patients <70 (n=78) and ≥70 (n=36) years were: 0.84 versus 0.49 comparing Karnofsky with ECOG PS; 0.63 versus 0.27 comparing ECOG PS with CFS; 0.76 versus 0.55 comparing Karnofsky PS with CFS.

Conclusion:
The shortest scale, ECOG PS, performed worst in older people. Discrepancies between ECOG and KPS readings were also almost twice as likely to occur in the older age group. As an already established tool in geriatric medicine, this first assessment of the Rockwood CFS in a cancer population suggests it may be more discriminatory in older age groups than established oncology performance status scales, warranting further evaluation as a more relevant measure of patient fitness for cancer treatment in frailler populations.

References:
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