# FRAILTY, COMORBIDITY AND CARDIOVASCULAR RISK ASSESSMENT IN OLDER PATIENTS WITH LUNG CANCER

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## INTRODUCTION

Frailty assessment is not yet routinely used within the UK [1]. Increased age and frailty has been associated with worse outcomes in patients with lung cancer [2,-4]. We prospectively assessed frailty, comorbidities and cardiovascular risk in older patients with lung cancer.

## METHODS

Patients aged ≥70 years referred to Clatterbridge Cancer Centre between March-October 2021 were included. We recorded baseline demographics, stage, planned treatment and index of multiple deprivation (IMD). We assessed WHO performance status (PS), G8 frailty score (G8), Charlson Comorbidity Index (CCI) and globorisk office risk score. G8 categorises frailty as severe (<11), intermediate (11-14) and low (>14). We used CCI ≥ 7 to indicate severe comorbidity. Correlation between PS and G8 scores was assessed using Independent-Samples Kruskal-Wallis Test.

## RESULTS

Forty-six patients were included, median age 78 years (range 71-92). Baseline demographics and clinical characteristics are presented in table 1. Treatment intent was curative in 16 patients (35%) and palliative in 30 patients (65%). Median PS was 1 (range 0-3). Scores for frailty, comorbidities and cardiovascular risk are presented in table 2. The G8 frailty score indicated severe, intermediate and low frailty in 16 (35%), 20 (43%) and 10 (22%) patients, respectively. There was >3kg weight loss in 15 patients (33%) and 13 patients (28%) did not leave their house. 34 patients (74%) had a CCI score ≥7. Globorisk office risk score predicted 10-25% risk of having a heart attack or stroke in the next 10 years in 33 patients (72%). PS correlated with G8 (p value = 0.009). However, PS 2 category included a wide range of G8 scores (figure 1). Eighteen patients (39%) were from neighbourhoods ranked as the most deprived areas in England (1st and 2nd IMD decile).

## BASELINE DEMOGRAPHICS AND CLINICAL CHARACTERISTICS

| Age | Median | Range |
|---|---|---|
| | 78 | 71 - 92 |
| **Sex** | N | % |
| Female | 20 | 43.5% |
| Male | 26 | 56.5% |
| **WHO Performance Status** | | |
| 0 | 3 | 6.5% |
| 1 | 23 | 50.0% |
| 2 | 13 | 28.3% |
| 3 | 7 | 15.2% |
| **Treatment Intent** | | |
| Curative | 16 | 34.8% |
| Palliative | 30 | 65.2% |
| Best supportive care only | 9 | 19.6% |

*Table 1. Baseline demographics and clinical characteristics*

## FRAILTY, COMORBIDITY AND CARDIOVASCULAR RISK SCORES

| Scores | Median | Min | Max |
|---|---|---|---|
| G8 Frailty Score | 12 | 2 | 16 |
| Charlson Comorbidity Index | 9 | 4 | 15 |
| Globorisk Office Risk Score | 9 | 6 | 25 |

*Table 2. Frailty, comorbidity and cardiovascular risk scores*

## CORRELATION BETWEEN WHO PERFORMANCE STATUS AND G8 FRAILTY SCORE

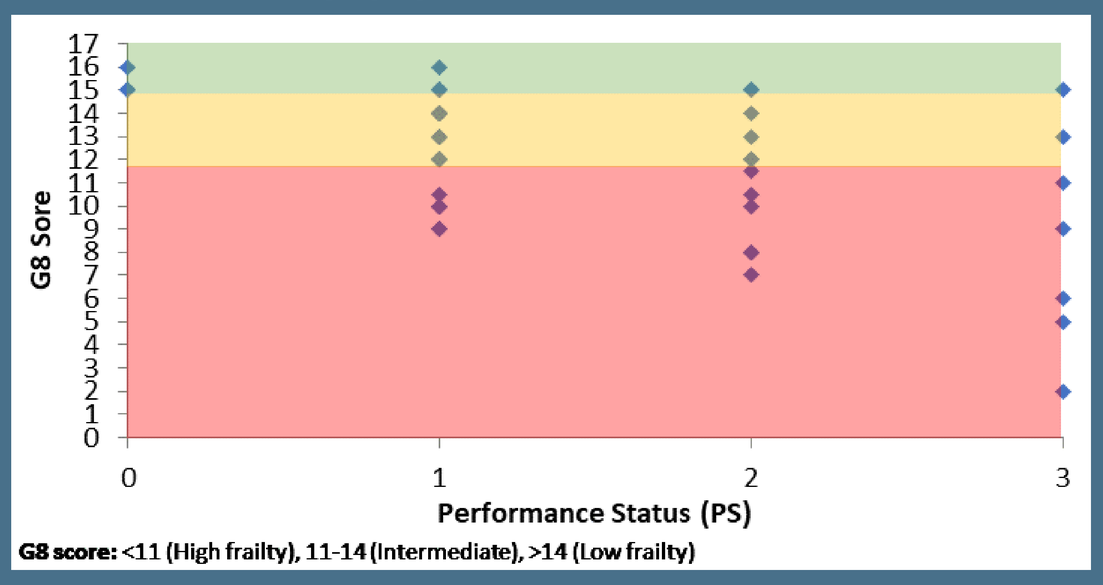


***Figure 1. Correlation of WHO performance status (PS) with G8 frailty score (G8).*** *High frailty (G8 <11) is represented in red, intermediate frailty (G8 11-14) in amber and low frailty (G8 >14) in green. Each patient is represented by one blue square. There is a significant correlation between PS and G8 (p value = 0.009). There is a broad range of G8 amongst patients with PS 2.*

## CONCLUSION

WHO PS fails to identify severely frail patients according to G8 frailty score. At least 7/10 patients had severe comorbidities and would require comprehensive geriatric assessment according to international recommendations from European Society of Medical Oncology and International Society of Geriatric Oncology[5]. Improving the assessment and management of frailty will enable us to optimise and individualise treatment decisions further.

## REFERENCES

**1.** Gomes et al. *ecancer* 2020 **2.** Arnold et al. Lancet Oncology 2019. **3.** Adizie et al. Clinical Oncology 2019. **4.** Middelburg et al. Clinical Oncology 2020 **5.** ESMO SIOG handbook 2015