

P11 UTILITY OF A NOVEL PROGNOSTIC TOOL IN UNSELECTED PATIENTS WITH MALIGNANT PLEURAL MESOTHELIOMA

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Introduction Malignant pleural mesothelioma (MPM) has a poor, but heterogeneous prognosis. Previously developed prognostic scores have been derived from patient cohorts not typical of routine UK practice. Recently, a novel prognostic tool, validated in unselected UK patients was published.¹

Objective To evaluate the utility of a novel prediction model by Brims *et al.*,¹ to predict prognosis in mesothelioma patients presenting to a two-site UK district general hospital.

Methods Consecutive patients diagnosed with mesothelioma between January 2010 and December 2015 were identified. Data were collected from electronic records at diagnosis (age, gender, histology, performance score, haemoglobin, albumin, weight loss) as well as dates of diagnosis and of death or last follow-up. Patients were allocated to prognostic groups as described by Brims *et al.* Groups were compared using Kaplan-Meier survival analysis. The proportion of patients whose survival fell within $\pm 33\%$ of the survival predicted from the validation cohort of Brims *et al.* was calculated.

Results 71 patients (60 male) were diagnosed with MPM during the study period, median age 74 (interquartile range (IQR) 15). Histological diagnosis was available in 66 (93%) patients (43.9% epithelioid, 21.2% undefined mesothelioma, 18.2% sarcomatoid, 13.6% biphasic, 3.0% atypical/mixed). Median overall survival was 262 days (IQR 284 days). 97% of patients could be allocated to a prognostic group. Median survival by Brims group, compared with predicted survival, is shown in Table 1.

Conclusions The "Brims Score" can be retrospectively calculated in a high proportion of patients, using routinely collected data. It appears reliably to separate patients into cohorts with statistically significant difference in survival. The large within-group variation in survival, however, limits the utility of the score as a means of answering the question, "How long have I got, doc?" for individual patients.

Abstract P11 Table 1 Comparison of median survival by Brims group with predicted survival

Brims Group	n	Median survival (days)	IQR (days)	Median predicted survival (days)	% of group within $\pm 33\%$ predicted survival
2	12	419	312	444	33.0
3	33	319	216	334	48.5
4	23	131	247	210	21.7

*Log-rank test
*p = 0.02

REFERENCE

- 1 Brims F, Meniawy T, Duffus I, *et al.* A novel clinical prediction model for prognosis in malignant pleural mesothelioma using decision tree analysis. *Journal of Thoracic Oncology* 2016;**11**(4):573–582.

P12 EXPLORING THE CHARACTERISTICS OF PATIENTS WITH MESOTHELIOMA WHO DECLINE CHEMOTHERAPY: A PROSPECTIVE COHORT OF 200 PATIENTS

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Introduction Malignant pleural mesothelioma (MPM) is an aggressive cancer with a poor prognosis. Treatment options are limited, and pemetrexed and cisplatin chemotherapy is the only intervention shown to extend life. Promising new therapies may provide alternate treatment options in the future.

Chemotherapy uptake varies in MPM. Some centres report rates as low as 46% in eligible patients. The aim of this study was to explore the characteristics of patients who declined chemotherapy, and to determine which factors were associated with chemotherapy refusal.

Methods Prospective data were collected on all patients diagnosed with MPM in one UK tertiary referral centre. Diagnosis of MPM and eligibility for chemotherapy were determined at the regional MPM multidisciplinary meeting. Patients were followed up until death or censored on 13/7/16.

Patient characteristics were compared using chi-squared, Fisher's Exact and unpaired T-tests. Kaplan Meier curves were drawn to compare survival between patients who accepted and declined chemotherapy. Logistic regression was used to assess associations between patient characteristics and chemotherapy uptake.

Results 200 patients were diagnosed with MPM between 1/3/08 and 8/6/16. 150 (75%) were eligible for chemotherapy. 93/150 (62%) patients received chemotherapy, 46/150 (31%) declined and 11/150 (7.3%) patients did not receive it for other reasons.

Patient characteristics are shown in Table 1. The group who declined chemotherapy were older (mean age 74.4 vs 68.4, $p < 0.001$), with a higher proportion of females (23.9% vs 10.8%, $p = 0.041$) and fewer patients with performance status (PS) 0 (17.4% vs 43%, $p = 0.005$). Patients who received chemotherapy had longer median survival (426 days vs 203 days, $p = 0.001$, HR 0.519, $p = 0.015$).

The factors associated with chemotherapy refusal were age (regression coefficient 0.144, $p < 0.001$) and PS ≥ 1 (coefficient 1.052, $p = 0.027$).

Conclusion This is the first study to report the characteristics of MPM patients who declined chemotherapy. Significant differences were seen compared with patients who received chemotherapy. Further research is needed to determine whether similar patterns are seen in other centres.

Reasons for refusal were not collected, but the association with age and worse performance status may reflect concerns about chemotherapy toxicity. Qualitative research could explore patients' reasons for refusing chemotherapy.