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# Real world outcomes in multiple myeloma in patients over the age of 75

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## INTRODUCTION

Outcomes for older patients with myeloma are inferior to younger patients. Frailty, comorbidity and poor performance status adversely effect outcomes in this patient group. These patients account for a large proportion of myeloma diagnoses but have been underrepresented in clinical trials. Clinical trails predominantly focus on a single line of treatment in selected patient populations and real world outcomes for complete treatment pathways are scarce .

## AIM

We reviewed the treatments received by patients aged 75 and over diagnosed with Plasma Cell Myeloma within Northumbria Healthcare NHS Trust (a UK district general hospital setting) over a 5 year period. We looked at patient factors and whole pathway outcomes for this group of patients. Treatments received were audited against NICE treatment pathways and outcomes compared to survival data from the Office of National Statistics.

## METHOD

We retrospectively identified all cases of myeloma diagnosed within the Trust between 01/01/2013 and 31/12/2017. Electronic records were reviewed to identify demographic information, performance status and comorbidity at diagnosis, therapy received, survival and cause of death. Data was collected up to 18/04/2019. Kaplan Meier survival curves and logrank analysis was performed using R software.

## RESULTS

There were 148 new diagnoses of myeloma in this period. 53 (36%) were over the age of 75 (range 75-94). By the end of the study period 45 patients had received treatment. Of the untreated patients 4 had died and 4 continued observation. Median overall and disease specific survival were 39 and 60 months from diagnosis and 38 and 55 months from first treatment (Fig 1). 27 (51%) patients died during the study period. 20 deaths (38%) were myeloma related. 7 deaths (13%) were from causes unrelated to myeloma. These consisted of 3 second malignancies (AML, cholangiocarcinoma, colorectal carcinoma), and 1 each of heart failure, stroke, frailty and death from unknown causes in a patient in remission.

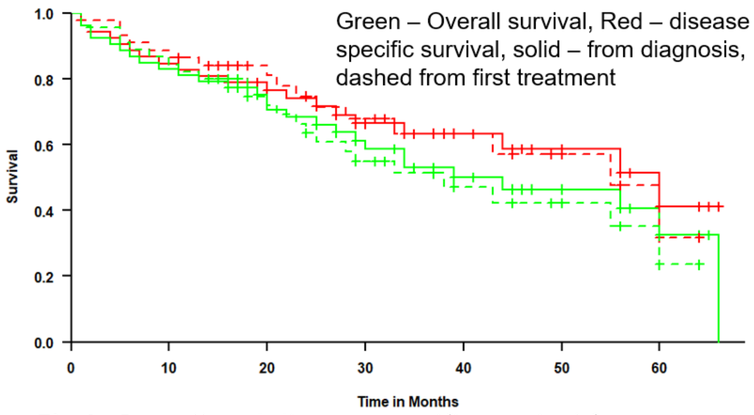


**Fig 1.** Overall and disease specific survival from diagnosis and first treatment.

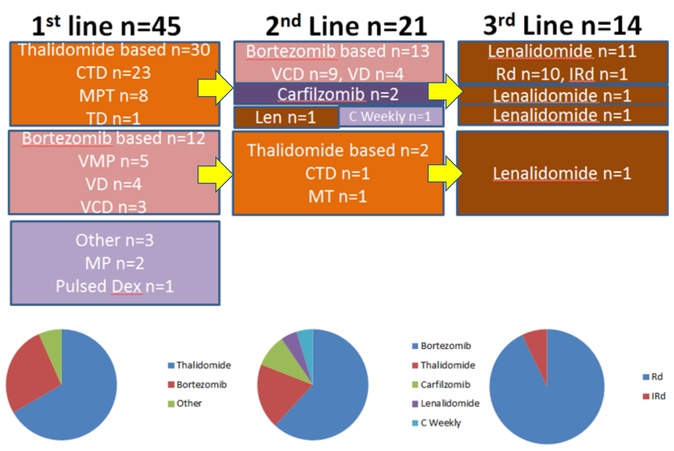


**Fig 2.** Treatment pathways for the 45 patients who received treatment

Figure 2 shows the treatments received and sequencing. 1 patient had also started 4th line pomalidomide and dexamethasone. All treatment was consistent with NICE approvals. Figure 3 shows the number of patients progressing to each line of treatment.

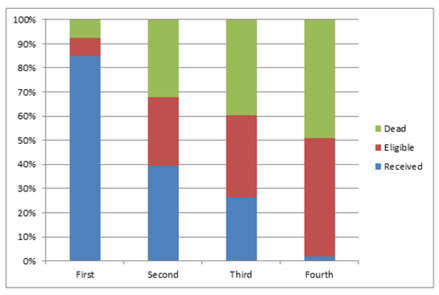


**Fig 3.** Lines of treatment received

There was no significant difference in OS from diagnosis between patients aged 75-79 and over 80 years old (median OS 65 vs 34 months, p=0.185). Poor ECOG performance status, 0-1 vs 2+ (median OS 56 vs 27 months, p=0.011(data missing for 1 untreated patient)) and comorbidity, HCT-CI 0-2 vs 3+ (median OS 60 vs 25 months, p=0.011 (collected for treated patients only)) were significantly associated with worse outcome.
For the 45 patients who received treatment having either poor performance status or higher levels of comorbidity was significantly associated with a worse outcome and there was a trend towards patients with both having an even worse prognosis (Figure 4).

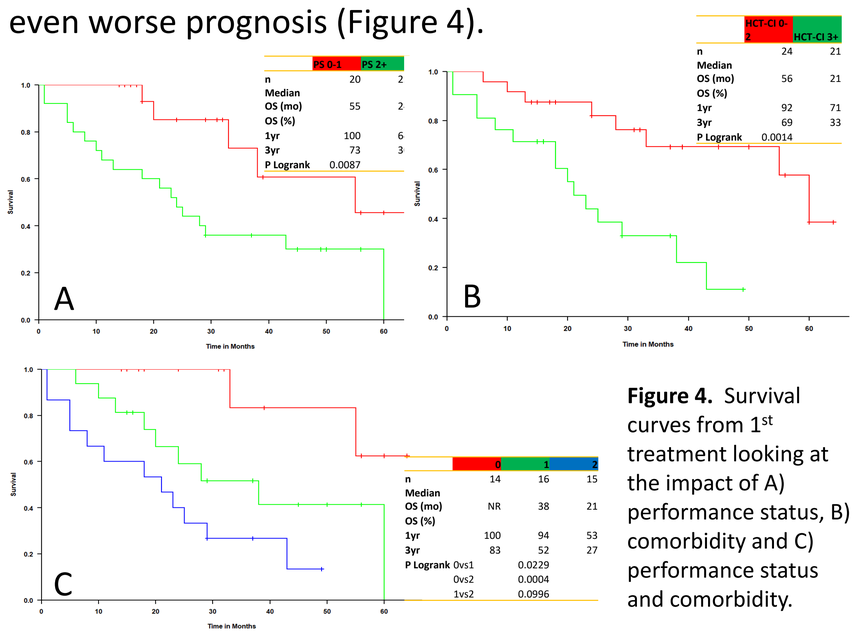


**Figure 4.** Survival curves from 1st treatment looking at the impact of A) performance status, B) comorbidity and C) performance status and comorbidity.

## CONCLUSIONS

The survival data for our cohort is comparable with the ONS data for myeloma survival in England for patients diagnosed between 2011-15 in this age group (ONS 31% net 5 year survival vs our observed estimated disease specific survival of 32% from first treatment or 41% from diagnosis). This suggests that our data is representative of real world UK outcomes for patients treated with funded therapies on NICE pathways. Poor performance status and comorbidity identified a high risk groups of patients with a poor outcome. Whilst more complex tools are available to assess frailty and comorbidity these are not yet routinely used in clinical trials or general haematology practice. We demonstrate that routinely collected clinical data can identify high risk patients. This group has an unmet need for effective well tolerated therapy and supportive care to improve outcomes.

## ACKNOWLEDGEMENT

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## REFERENCES

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/www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/datasets/cancersurvivalratescancersurvivalinenglandadultsdiagnosed
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