Polynesian Ethnicity and Outcomes for Multiple Myeloma in New Zealand: a Single Centre Study from the Australia and New Zealand Myeloma and Related Diseases Registry

Blacklock, H.[1] Wellard, C.[2] Moore, E.[2] Jackson, S.[1] Royle, G.[1] Rajagopal R[1] , Wemyss, A.[1] James, M.[1] McQuilten, Z.[2] Wood, E.[2] Spencer, A.[2]

1. Dept of Haematology, Middlemore Hospital, Auckland, New Zealand
2. Monash University, Melbourne, Australia

Aim

To compare characteristics and outcomes of Polynesians (NZ Maori and Pacific Island) patients with others with Multiple Myeloma (MM) in a New Zealand (NZ) hospital.

Method

- Data for all patients with MM from Middlemore Hospital in South Auckland, NZ, registered on the Myeloma and Related Diseases Registry (MRDR) from 21 Jan 2013 – 27 Sept 2017 were analysed.
- Polynesian ethnicity included those who self-identified as NZ Maori or Pacific Islander and had at least one Polynesian grandparent. The comparator group included patients of other ethnicities, predominantly European.

Figure 1. Overall survival in MM: Pacific Islanders v rest of cohort (Middlemore Hospital)

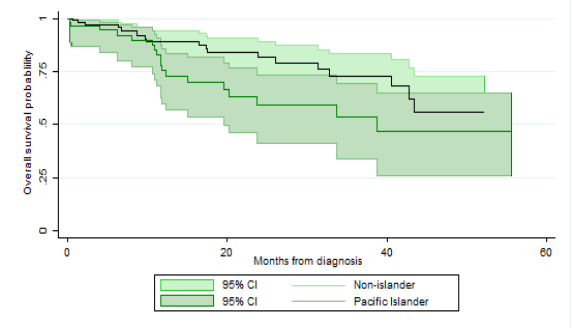
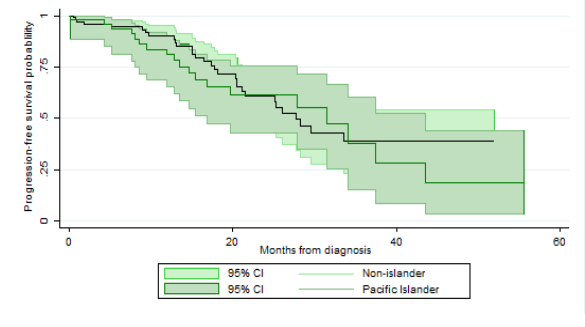


Figure 2. Progression-free survival in MM: Pacific Islanders v rest of cohort (Middlemore Hospital)



Result

From a population of 525,000 in South Auckland (15.7% NZ Maori, 21.5% Pacific Islanders and 62.8% Other), MRDR data on 163 patients with MM were available: 59 (36%) Polynesians (includes NZ Maori and Pacific Islanders) and 104 (64%) of other ethnicities. Polynesian patients were younger (median age 63 v 70, p= 0.001) with fewer patients >70 years (31 v 50%, p= 0.016). The proportion of males (44 v 53%, p=0.28), and the risk group status (34 v 31% high risk, p=0.68) were similar. A higher proportion of Polynesians were unable to work at presentation (ECOG 2-4, 27 v 12%, p = 0.03), were diabetics (17 v 7%, p=0.04), and had renal insufficiency (24 v 12%, p=0.04) at diagnosis.

Middlemore: Pacific Islanders with MM versus the rest of the cohort

Variable	Pacific Islanders % or median (IQR)	Non-Pacific islanders % or median (IQR)	P value
Agegroup > 70	18 (31%)	52 (50%)	0.016
Age, median	63 (57-71)	70 (64-76)	0.001
Male	26 (44%)	55 (53%)	0.28
ISS III	11 (28%)	11 (15%)	0.12
High risk group	20 (34%)	32 (31%)	0.68
LDH (U/L)	204 (186-223)	251 (177-310)	0.3
Serum Creatinine, median (µmol/L)	85 (68-140)	89 (73-117)	0.8
eGFR	66 (41-90)	69 (54-82)	0.61
ECOG 2-4 (unable to work)	12 (27%)	9 (12%)	0.032
Diabetes	10 (17%)	7 (7%)	0.04
Hypercalcaemia	6 (10%)	6 (6%)	0.3
Renal insufficiency	14 (24%)	12 (12%)	0.041
Anaemia	19 (32%)	23 (22%)	0.16
Bone lesions	30 (51%)	60 (58%)	0.4
Best clinical response (BCR, ≥PR)	27 (79%)	62 (91%)	0.093
Bortezomib-based 1st line therapy	41 (89%)	82 (89%)	1
BCR, bort-based therapy (≥PR)	26 (81%)	60 (94%)	0.059
Time from Dx to Rx, median (days)	20 (7-69)	21 (7-40)	0.44
Received ASCT*	10 (40%)	18 (53%)	0.33
Time to disease progression, median (mths)	31.5 (14.6-43.6)	27.7 (17.8-†)	0.59
Overall survival (median, mths)	38.7 (12.3-†)	(32.8-†)	0.057

*patients with diagnosis ≥ 1 year before Sept 2016 & review data ≥ 1 year after diagnosis & age≤70,
†=75th percentile is not reached
Survival analysis was used to calculate time to disease progression and overall survival.

Conclusion

- The Registry data allows assessment of treatment practices and outcomes at Middlemore Hospital, which treats ~ 100% of all new MM patients from an ethnically diverse population.
- Polynesian patients are diagnosed at a younger age, (median age 57 v 71, p=0.001) with fewer patients > 70 years (31% v 50%, p=0.016). Attention is drawn to the reduced survival and access to transplantation in the Polynesian group.