

5-year demographic analysis on deceased donors in UMMC Bone Bank: A Reality

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INTRODUCTION:

UMMC Bone Bank collects and stores long bones for clinical applications in orthopaedic procedures. Donated bones are subjected to quality control system to ensure safety of the recipient¹. The study aimed to evaluate the demographic characteristics of the donors who had donated long bones to our bone bank over the past five years.

METHODS:

We conducted a retrospective review of demographic data spanning five years, from 2018 to 2022. This review encompasses information on age, gender, ethnicity, and religion. Additionally, the acceptance and rejection rates of the donated bones were included.

RESULTS:

A total of 122 donated bones were obtained from 19 donors, with 13 (68%) were male and 6 (32%) female donors. The mean age of the donors was 41.2 ± 9.86 years old ranging from 19 to 55. Chinese donors made the highest contribution, with 13 donors, followed by Indian and Malay donors (Table 1). Among the donors, 10 (52%) were Buddhist, 4 (21%) were Hindu, 2 (11%) were Muslim, 1 (5%) was Christian, and 2 (11%) others. Out of the 122 donated bones, 85 (69.7%) were accepted as bone allografts (Figure 1).

Figure 1: Most procured bones in 2018-2022

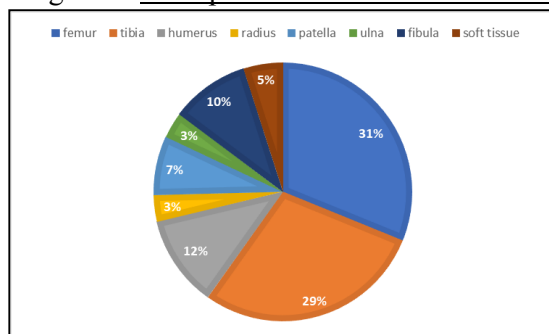


Table 1 displays the Demographic information on the 5-year of cadaveric donors in UMMC Bone Bank

Year / Criteria	2018	2019	2020	2021	2022	Total
	n: 5	n: 4	n: 5	n: 1	n: 4	19
Gender						
Male	2	2	5	1	3	13
Female	3	2			1	6
Ethnicity						
Chinese	3	3	4		3	13
Indian	1	1	1	1		4
Malay	1				1	2
Religion						
Buddhist	3	2	3		2	10
Christian					1	1
Hindu	1	1	1	1		4
Islam	1				1	2
Others		1	1			2

DISCUSSIONS:

The findings of this study provide valuable insights into the demographic characteristics of donors and the acceptance rate of bone allografts in UMMC Bone Bank. The gender ratio is similar with previous study². The ethnic distribution of donors was predominantly Chinese, followed by Indians and Malays. This finding may highlight the importance of considering cultural and ethnic factors when promoting bone donation.

CONCLUSION:

Understanding the demographic characteristics of donors and the factors that influence donation can help to develop targeted strategies to increase donation rates.

REFERENCES:

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