

Aeromedical Trauma Admissions in UK Military Personnel a Decade After Afghanistan: The Burden of Non-Battle Injury

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Background

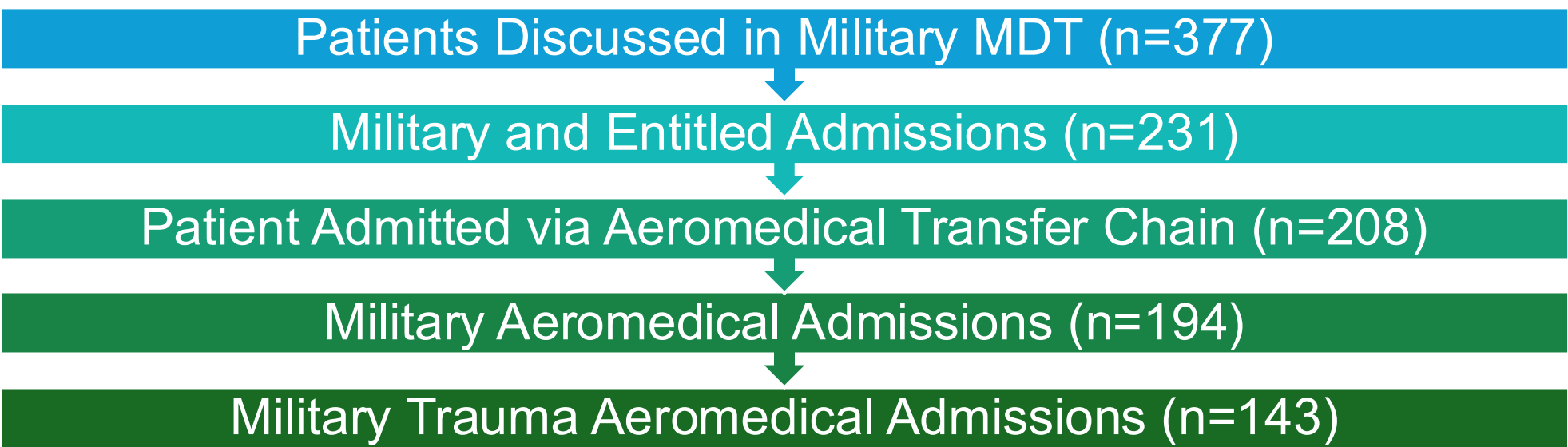
The Royal Centre for Defence Medicine (RCDM) is based at University Hospitals Birmingham Foundation Trust (UHBFT) and has been the aeromedical evacuation site for UK military patients since 2001, providing hospital care within the UK Role 4 (R4) facility framework.¹ Since the cessation of combat operations in Afghanistan in 2014, UK Defence has been engaged in contingency operations around the world. Although combat injuries receive significant attention, non-battle injuries can be severe and are currently more common in this interwar period, making a significant impact on the operational capacity of our forces.

Aim

To investigate the UK military aeromedical evacuation admissions to the UK R4 following non-battle trauma during an 18-month period between September 2023 and March 2025.

Methods

Military patients admitted with traumatic injuries over an 18-month period were retrospectively identified from RCDM Multidisciplinary Team (MDT) records. Demographic, logistical, and clinical data were derived from a manual search of UHBFT electronic patient record systems. Institutional approval was granted prior to data collection (CARMS-22849).



Results

There were 231 military patients arriving via the aeromedical chain during this study period, of which 68% (n=143) were military patients with traumatic injuries. Median age was 28 years (IQR 23-35). The median time from injury to admission was 5 days (IQR 3-8 days), with a median length of stay of 5 days (IQR 3-8).

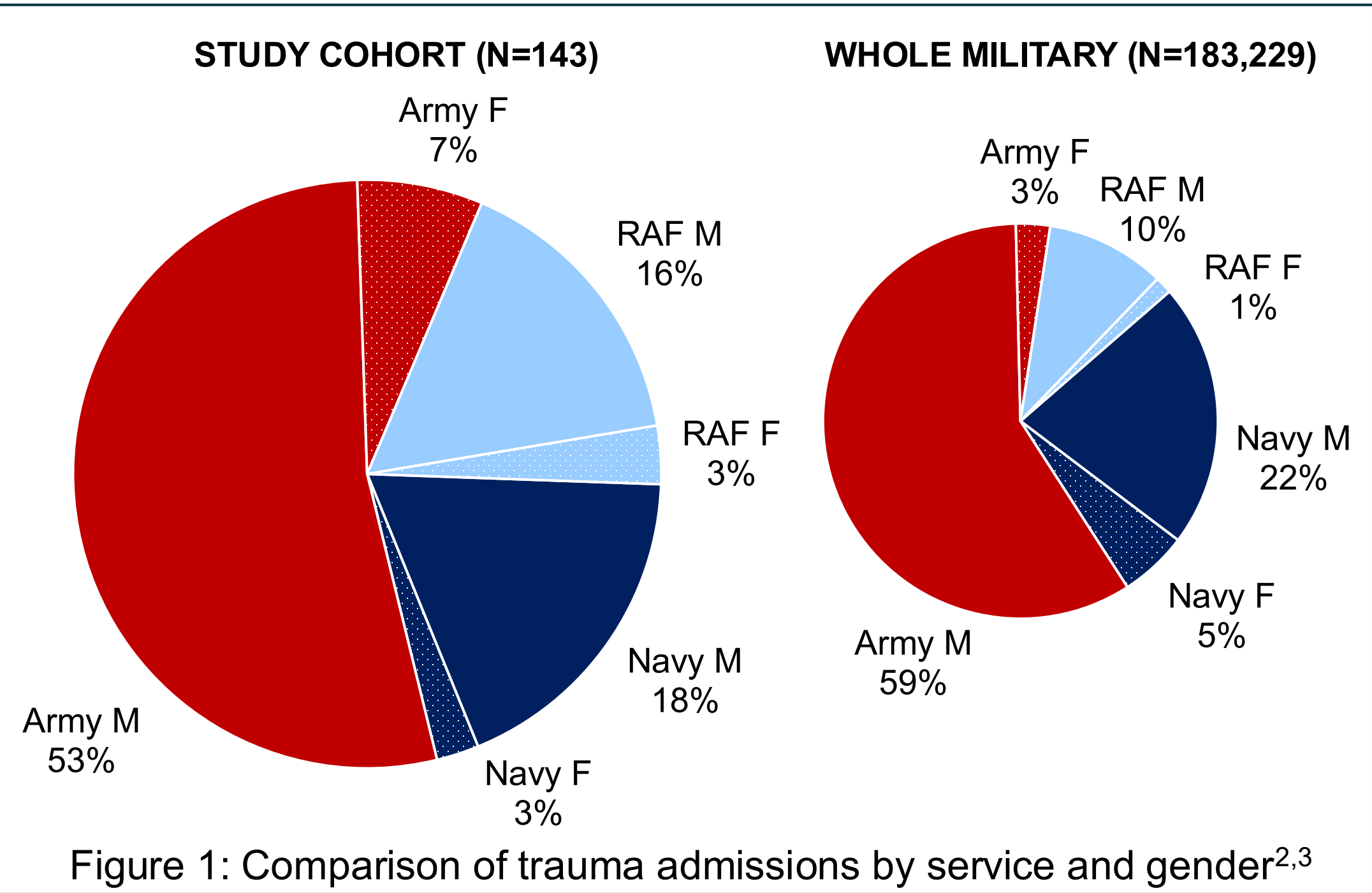


Figure 1: Comparison of trauma admissions by service and gender^{2,3}

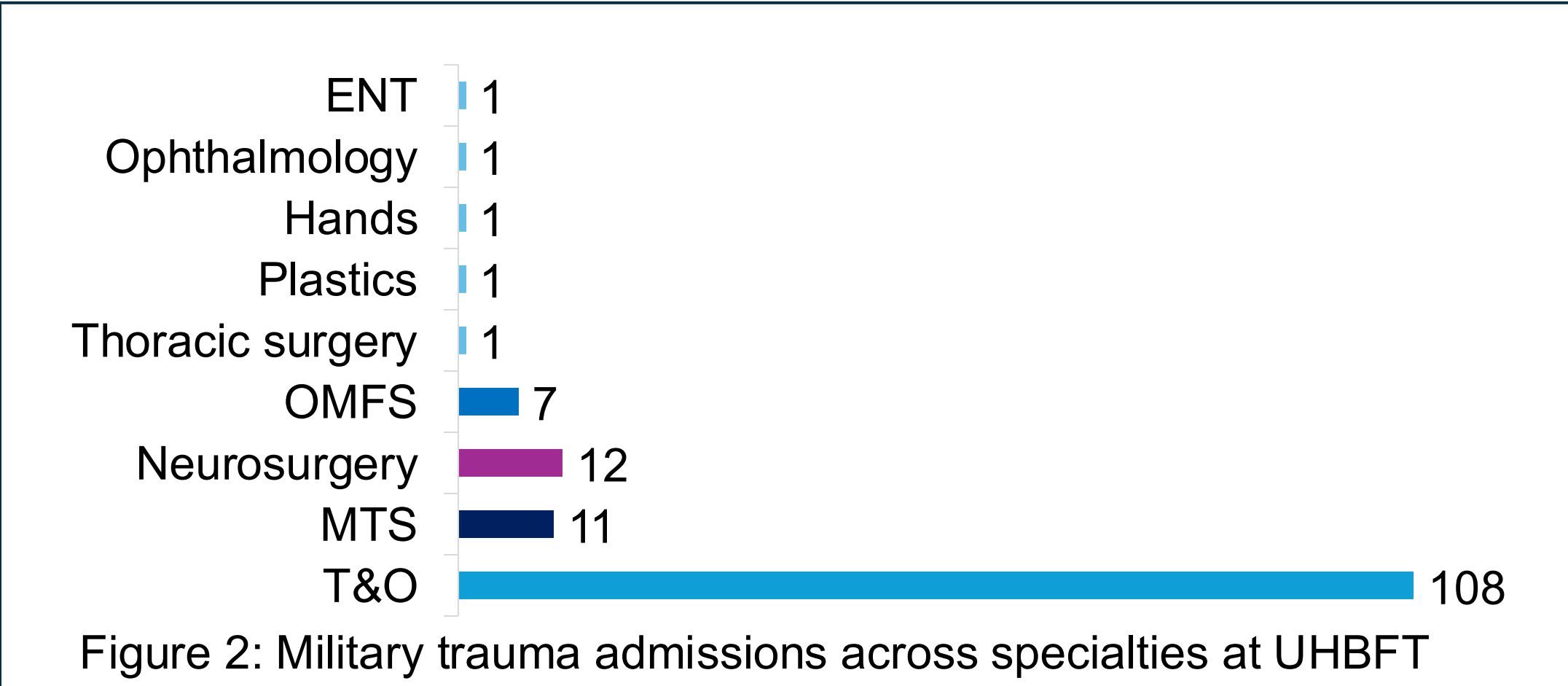


Figure 2: Military trauma admissions across specialties at UHBFT

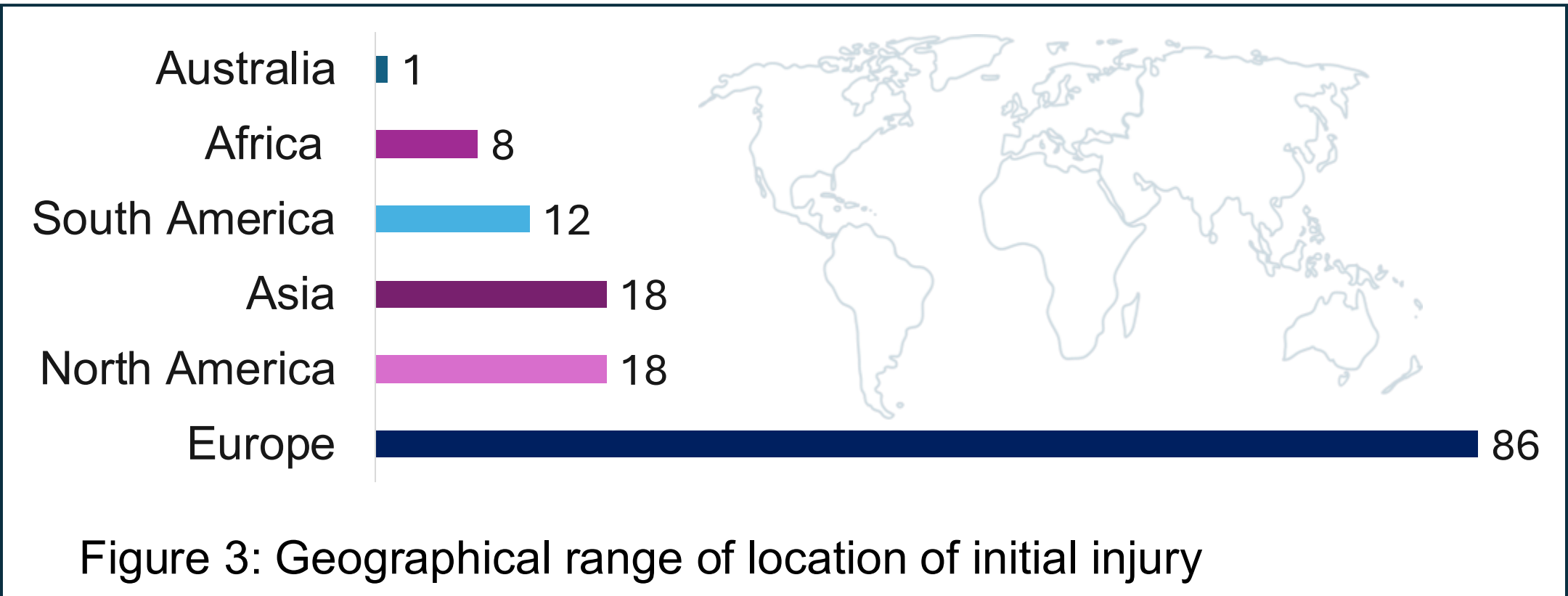


Figure 3: Geographical range of location of initial injury

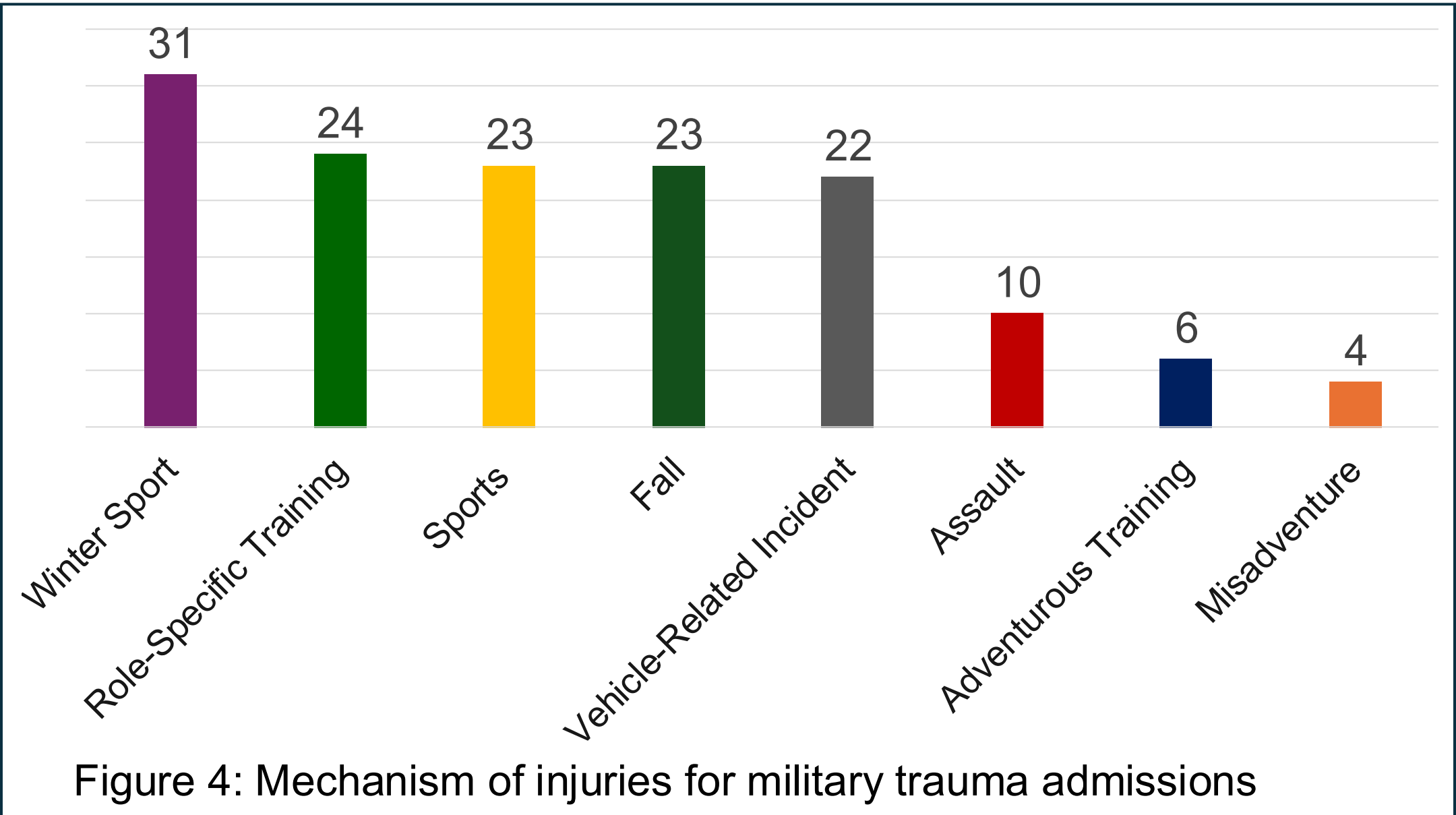


Figure 4: Mechanism of injuries for military trauma admissions

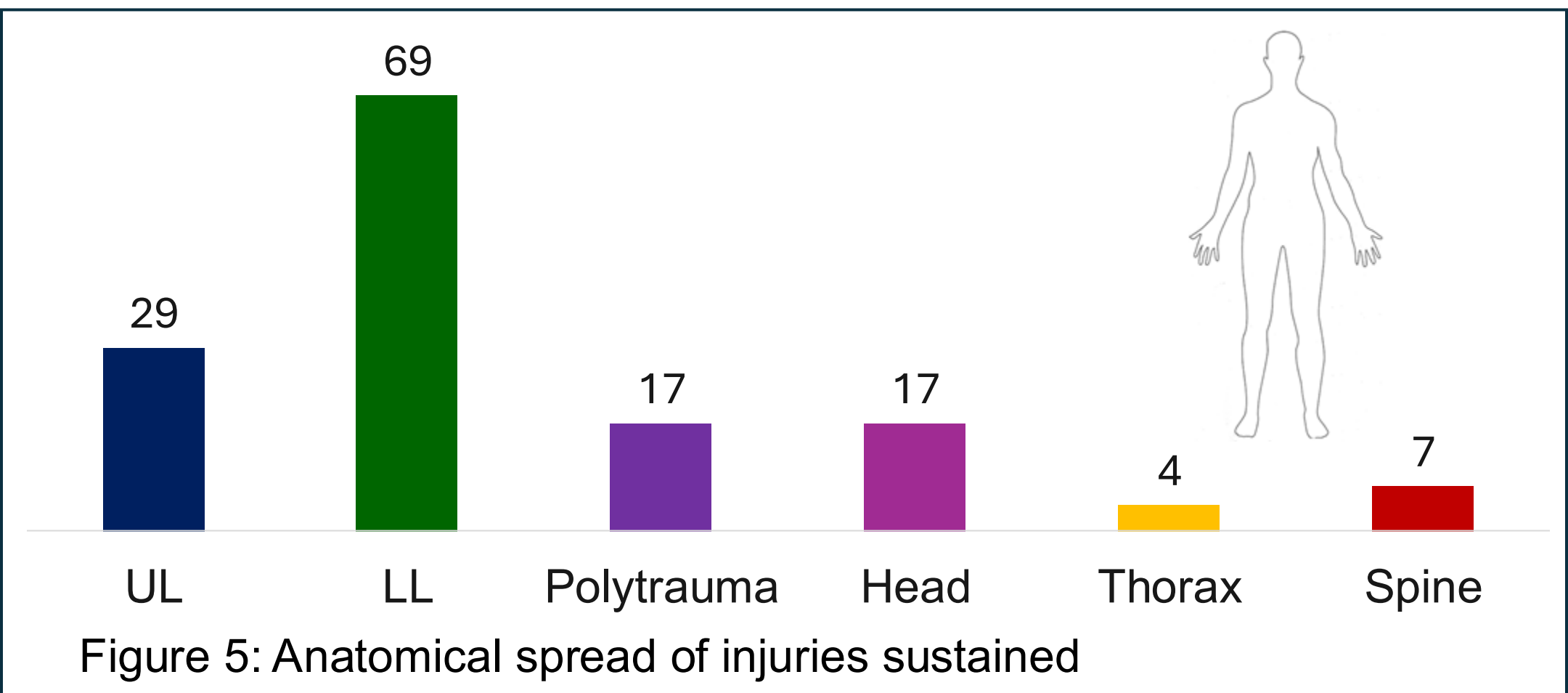


Figure 5: Anatomical spread of injuries sustained

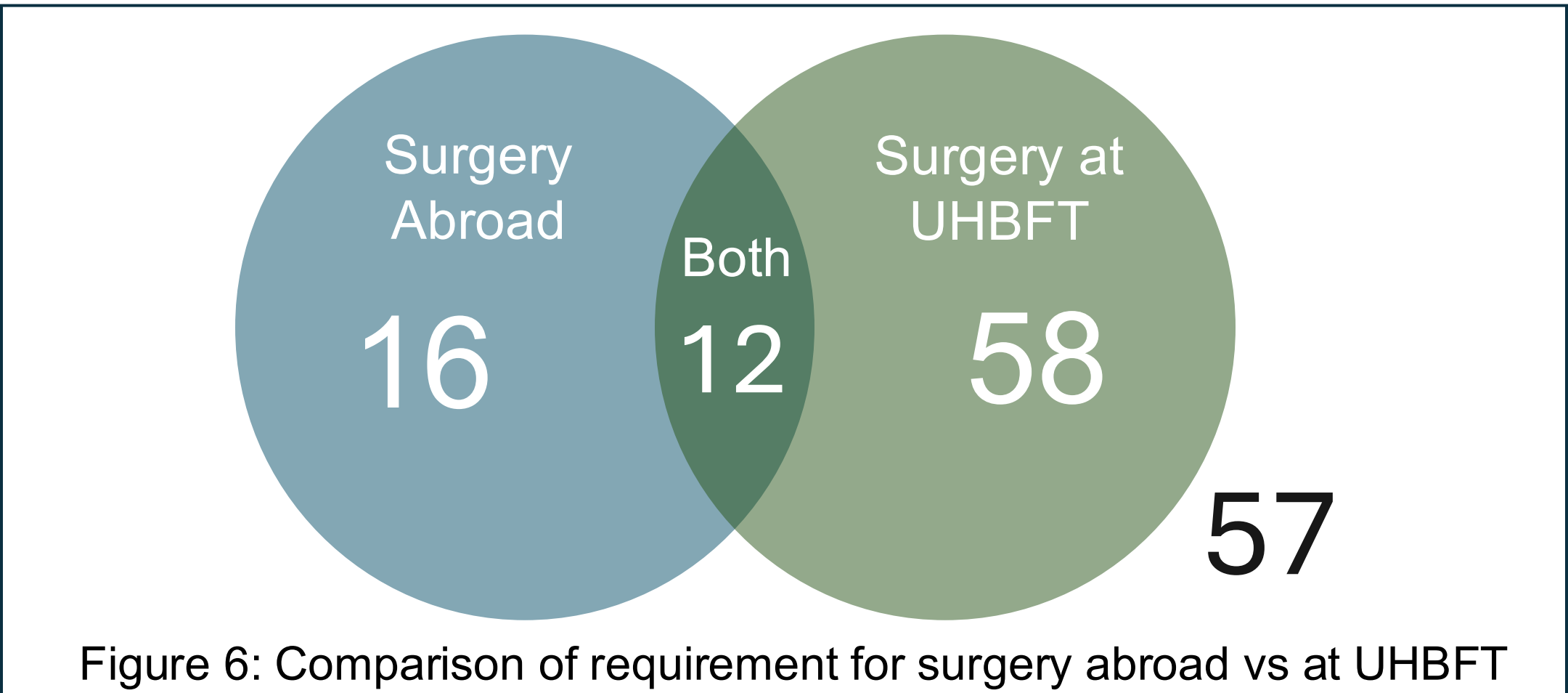


Figure 6: Comparison of requirement for surgery abroad vs at UHBFT

Discussion

The UK's R4 facility at UHBFT has treated a substantial number of patients with non-battle injuries, with winter sports emerging as a major risk factor. The higher proportion of female patients compared with earlier studies⁴ likely reflects the increase in women entering physically demanding and operational roles, resulting in greater exposure to the same risks historically seen in male personnel. The predominance of younger patients, particularly those aged 23–35, aligns with the period of the most intense physical training and activity in military careers. This study highlights the significant burden of care and resource demands for military trauma patients, even during periods outside of combat operations. It underscores the importance of efficient and safe pathways for treatment and aeromedical evacuation during overseas duties to ensure optimal care and operational readiness.

References: ¹Ministry of Defence. (2014). JSP 950 Leaflet 1-4-1: Operational Patient Care Pathway. ²UK Government. (2024). UK Armed Forces biannual diversity statistics: April 2024. ³UK Government. (2025). Quarterly service personnel statistics: 2025. ⁴Toman E, Beaven A, Naumann DN, Non-battle injury among repatriated UK armed forces since cessation of combat operations. *BMJ Military Health* 2018;164:19-24.