

Enteral Feeding within a Haematology service over a 2 year period.



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Background

- Patients with haematological malignancies are at high risk of developing malnutrition¹. This is associated with higher risk of infection, increased time to engraftment and prolonged hospital stay.²
- The European Society for Blood and Marrow Transplantation (EBMT) recommend that enteral feeding (EN) is generally preferred to parenteral nutrition (PN) in the case of a functioning GI tract due to its positive effects on GI integrity and microbiome.³
- However, within clinical practice PN is often used in preference to EN in allo-HSCT (allogeneic haematopoietic stem cell transplantation).⁴
- Often practical reasons such as tube feeding issues, challenging gastrointestinal symptoms and unknown degree of malabsorption^{5,6} limit use of EN in this patient cohort.
- Higher rate of side effects including central line infections and metabolic complications⁷ remain a risk with use of PN.

Aim and Objectives

To analyse all patients commenced on EN within a haematology service over a two-year period.

Research Design

- Data was collected retrospectively from the electronic patient record on all patients requiring EN from January 2022 until December 2023.
- There was a total of 29 episodes of EN. 12 in 2022 and 17 in 2023. Comparisons were made between the two time periods.
- Patients were located on the HSCT (transplant) unit as well as outlying wards (admissions for treatment, new diagnoses and post transplant complications).
- Anthropometry, patient demographics, diagnosis, type of feeding tube and reason for EN including any feeding challenges were recorded.

Results

	Male: Female (%)	Age (years)	Weight (Kg)	BMI (Kg/m ²)	Lymphoid: Myeloid (%)	HSCT unit: outlying ward (%)	Hospital LOS (days)	Total days on EN (days)
2022	75:25	55yrs (33-78yrs)	61kg (41.5-81.2kg)	20.3kg/m ² (14.8-27.9kg/m ²)	58:42	25:75	69days (23-183days)	28days (2-126days)
2023	82:18	60yrs (28-76yrs)	66.9kg (46-87.8kg)	21.9kg/m ² (16-28.2kg/m ²)	65:35	18:82	61days (10-179days)	20days (1-49days)

Table 1: Demographic characteristics (mean and range) of patients. Note similar nutritional status, diagnosis, location and length of stay and days on enteral feeding was displayed across the two time points.

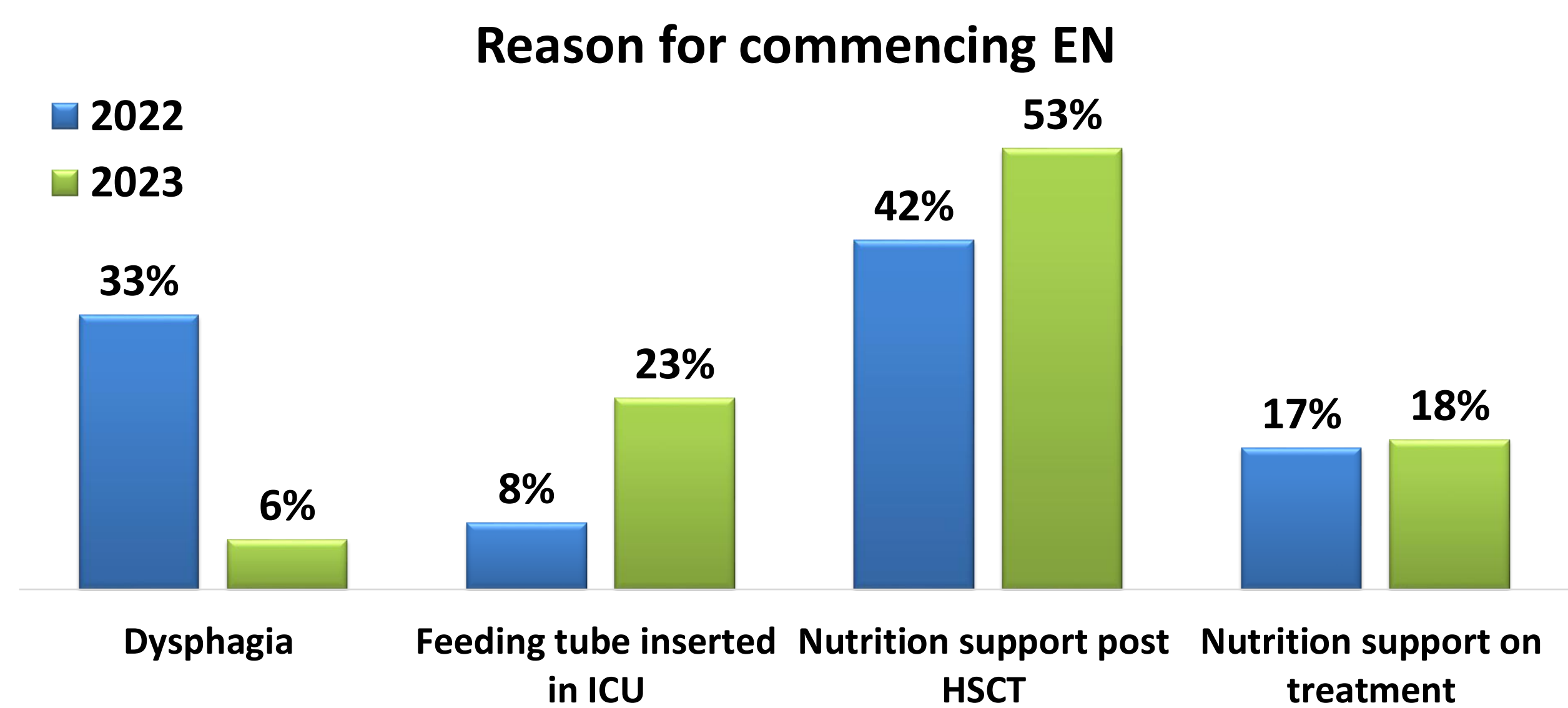


Figure 1: The majority of patients across both time points required EN post allo-HSCT for nutrition support.

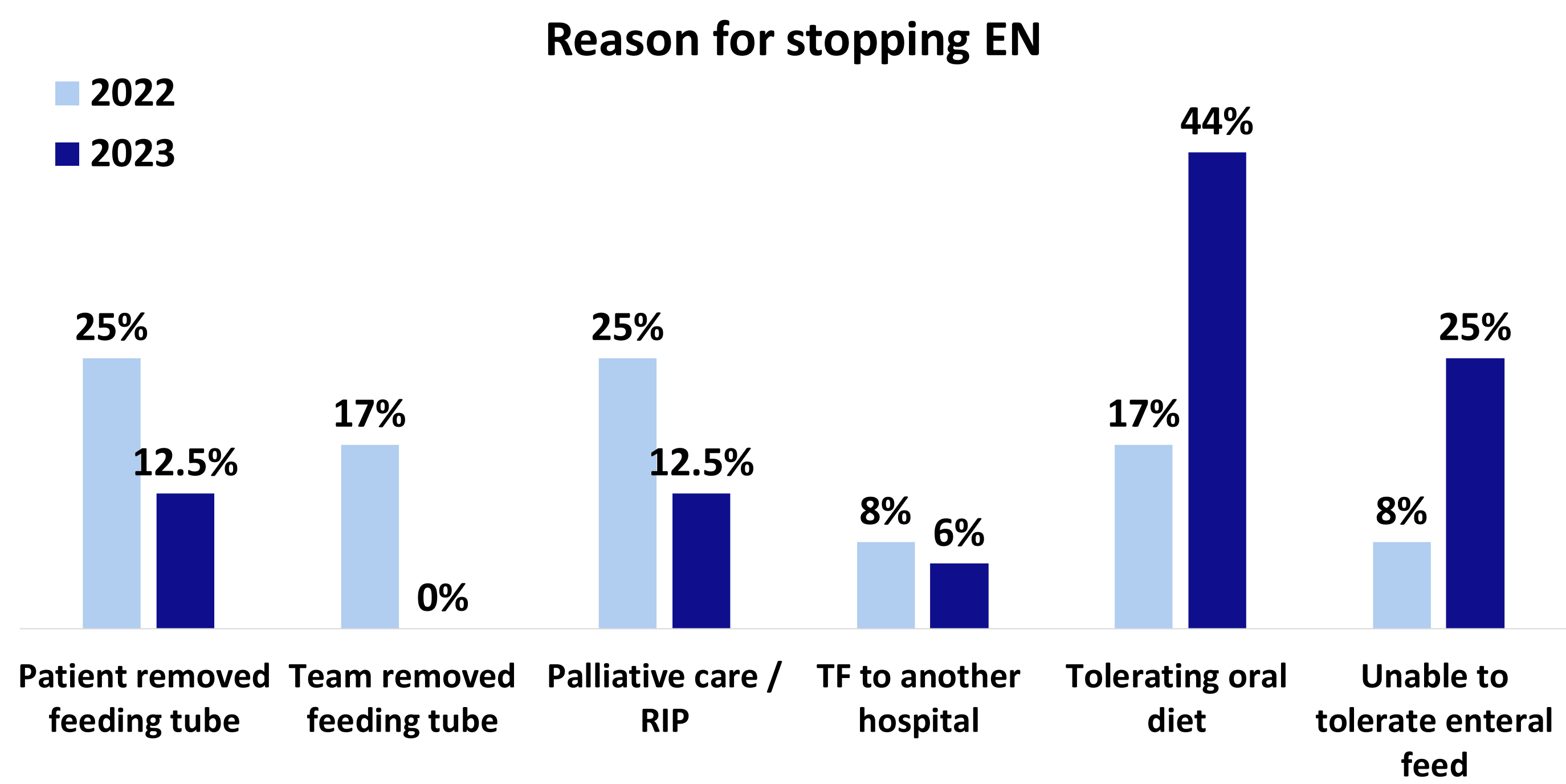


Figure 2: Premature removal of enteral feeding tubes occurred across both time points. In 2023 increasing numbers of patients were re-established on oral diet however there was also an increase in feeding tolerance issues to include nausea, abdominal cramping, volume of diarrhoea and early satiety.

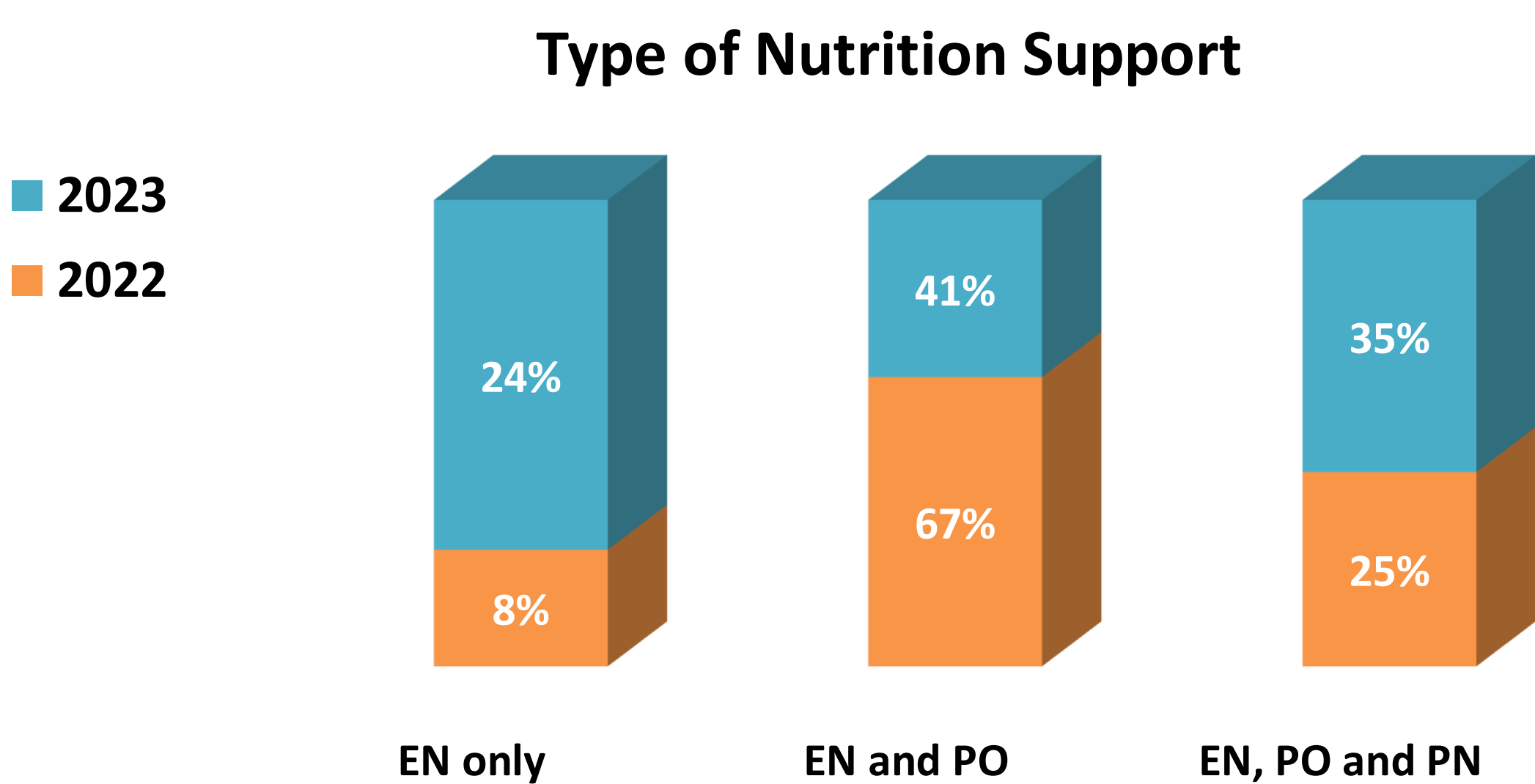


Figure 3: This shows the role of supplementary enteral feeding in addition to oral diet (PO). There is still a clear need for parenteral nutrition (PN) in this patient cohort with an average of 30% of patients still requiring PN.

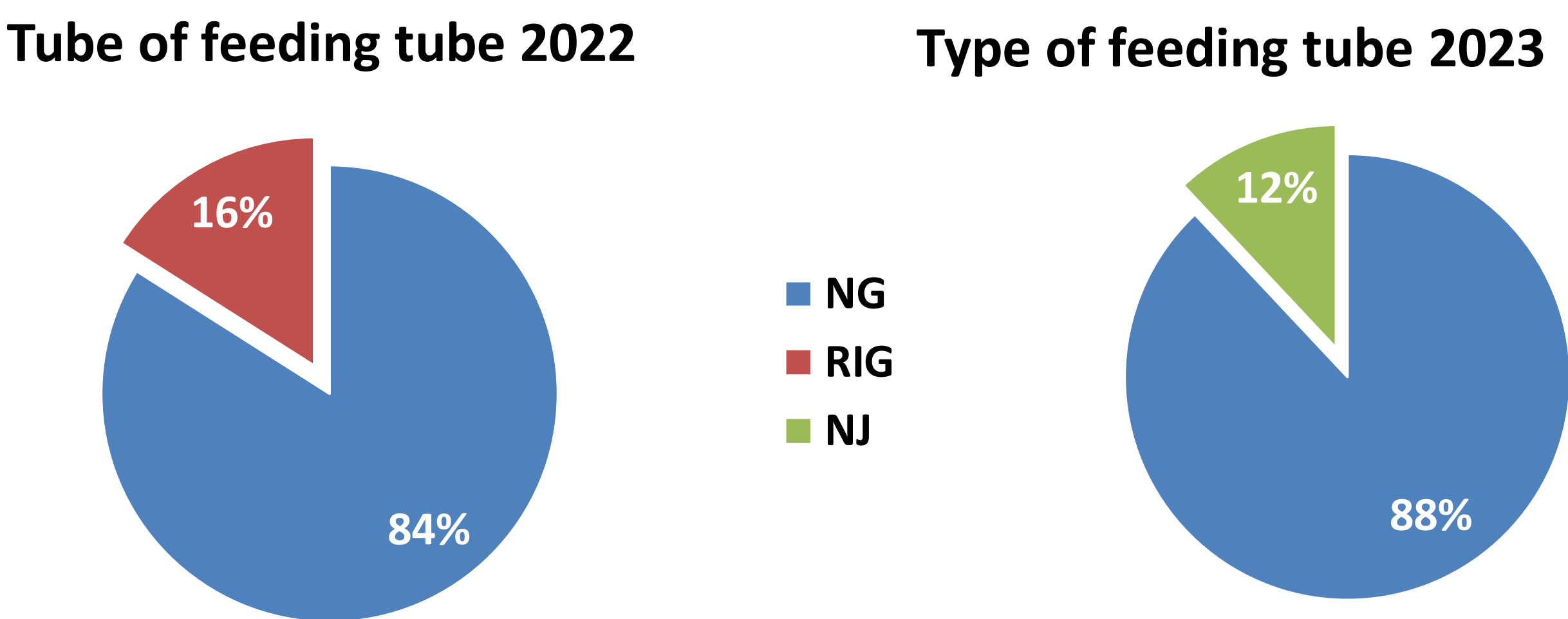


Figure 4: The most common tube of choice for this patient cohort across both time points was nasogastric (NG). There were 2 episodes of home enteral feeding (HEF) in 2022 and 3 in 2023. A move from longer term radiologically inserted gastrostomy tubes (RIG) to shorter term nasoenteric feeding tubes was noted.

Conclusion

- Although this was a small population our experience has shown that EN can have a beneficial role within the malignant haematological patient cohort, particularly for those patients with gut GVHD post allo-HSCT.
- Nearly one third of patients still required PN. This highlights the complexity of nutritional management of GVHD patients who often require EN, PN and oral diet in the aim to meet their nutritional requirements.
- There was a notable improvement in 2023 of patients remaining on EN until oral diet was successfully re-established prior to removal of enteral feeding tube.
- A small percentage of patients required EN on discharge across both time points. HEF reduces LOS and optimises time at home. Choice of feeding tube was based on predicted duration of EN.
- As predicted there was a low number of EN on the HSCT unit with the majority of feeding tube placements taking place on outlying wards.
- Next steps could include identifying a cohort of patients on the HSCT unit to trial EN, in conjunction with haematologists and nursing teams with the patient at the centre. Development of care pathways and multidisciplinary guidelines to increase knowledge and enable adequate triaging of patients may enhance success rates.

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