

Introduction

Malnutrition is prevalent in head and neck cancer and can affect up to 40% of patients prior to surgery. Evidence shows that poor baseline nutritional status can lead to poor outcomes after surgery. Use of an accurate screening tool is essential for timely diagnosis of malnutrition to prevent associated complications in the postoperative setting.

Currently, a universally accepted method to screen patients is still lacking in head and neck surgery. However, the geriatric nutrition risk index (GNRI) has shown promise in other patient populations. Thus, the purpose of this project is to quantify the prevalence of malnutrition using the GNRI and assess if there is an association between the GNRI and postoperative complications.

Methods

- A retrospective review of patients with head and neck cancer who had surgery from 2012 to 2021.
- Inclusion criteria: oral cavity, oropharynx, and hypopharynx cancers and a serum albumin measured 6 months prior to surgery.
- GNRI was calculated as follows:
 - **GNRI = 1.519 x albumin + [41.7 x (current body weight/IBW)]**

Results

Total patients: 44
Age (mean + SD): 62 ± 12
Sex: 68% males and 32% females

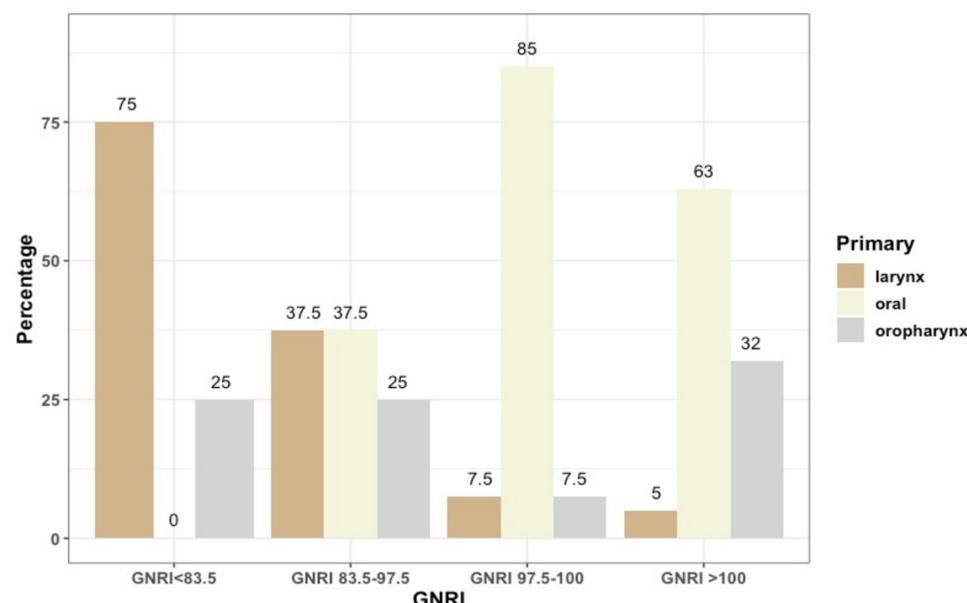


Figure 1. Distribution of primary cancer sites stratified by GNRI scores

Table 1. Complications in patients with low and high GNRI scores

	GNRI <97.5, N= 12	GNRI ≥97.5 N= 32	P Value
Number of patients with complications (%)	8 (67)	6 (19)	0.016
Return to the OR			
Yes (%)	5 (42)	4 (13)	
No (%)	7 (58)	28 (87)	0.087
Total LOS, day (mean ± SD)	18 ± 23	7 ± 7	0.119
Discharge location			
Home (%)	8 (67)	30 (94)	
SNF (%)	4 (33)	2 (6)	0.039

Summary

Of the 44 patients included:

- 27% patients were malnourished with an GNRI <97.5

Malnourished patients had a significantly higher:

- Prevalence of larynx as the primary cancer site
- Postoperative complications and discharge to a SNF

Conclusions

- Malnutrition, defined by an GNRI <97.5, was associated with increased complications among head and neck cancer undergoing surgery.
- The GNRI is a simple tool that can be used clinically to identify patients at risk for malnutrition-associated complications.

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