



### Introduction

Cancer patients often suffer from malnutrition related symptoms which can greatly affect their health and treatment outcomes. To tackle this problem, a two-phase quality improvement project was launched at Day Care Unit (DCU) at NCCCR in Qatar. The project aimed to evaluate the prevalence of malnutrition and introduce interventions to enhance the nutritional well-being of cancer patients receiving anti-cancer treatment in the DCU.

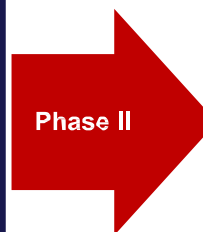
### Methods

In the first phase, a screening pilot study was conducted, involving random selection of 100 patients with specific cancer types at DCU. Malnutrition was evaluated using the Malnutrition Screening Tool (MST), with scores of 2 and above indicating malnutrition. The study found that 85% of the patient suffered from malnutrition, emphasizing the necessity for intervention.

In the second phase, another group of 102 cancer patients with MST scores of 2 and higher were studied. These patients underwent personalized dietary assessments, received nutritional counseling and were provided with customized dietary plans and supplements tailored to their requirements. The effectiveness of these interventions were evaluated at 3 points: baseline, 4th week, and 8th week.



A screening pilot study was conducted, involving random selection of 100 patients with specific cancer types at DCU. Malnutrition was evaluated using the Malnutrition Screening Tool (MST), with scores of 2 and above indicating malnutrition. The study found that over 85% of the patient suffered from malnutrition, emphasizing the necessity for intervention.



In the second phase, 102 patients diagnosed with specific types of cancer and MST scores of 2 and higher were chosen. These patients underwent personalized dietary assessments, received nutritional counselling and were provided with customized dietary plans and supplements tailored to their requirements. The effectiveness of these interventions were evaluated at 3 points: baseline, 4<sup>th</sup> week, and 8<sup>th</sup> week.

### Results

The outcomes of this project were encouraging. Out of 102 patients, 69% displayed notable enhancement in nutrition ( $P=0.001$ ), evidenced by MST scores below 2 during the 4th week follow up assessment. This improvement persisted into the 8th week, with 66% of patients still showing progress ( $P=0.001$ ) indicated by MST scores below 2 (see Table 1). The majority of patients diagnosed with malnutrition were gastrointestinal cancer (25.5%), Gynecancer (19.6%), and hematology (15.7%) (see Figure 1). There were no significant difference in outcomes based on age or gender.

Time	MST Score						
	0	1	2	3	4	5	6
Initial	x	x	30 (29.4%)	55 (53.9%)	12 (11.8%)	4 (3.9%)	1 (1%)
4th Week	67 (65.7%)	2 (2%)	14 (13.7%)	16 (15.7%)	2 (2%)	1 (1%)	0
8th Week	67 (65.7%)	2 (2%)	15 (14.7%)	10 (9.8%)	2 (2%)	1 (1%)	0

Table 1: MST scores and % at initial, 4<sup>th</sup> week, and 8<sup>th</sup> week

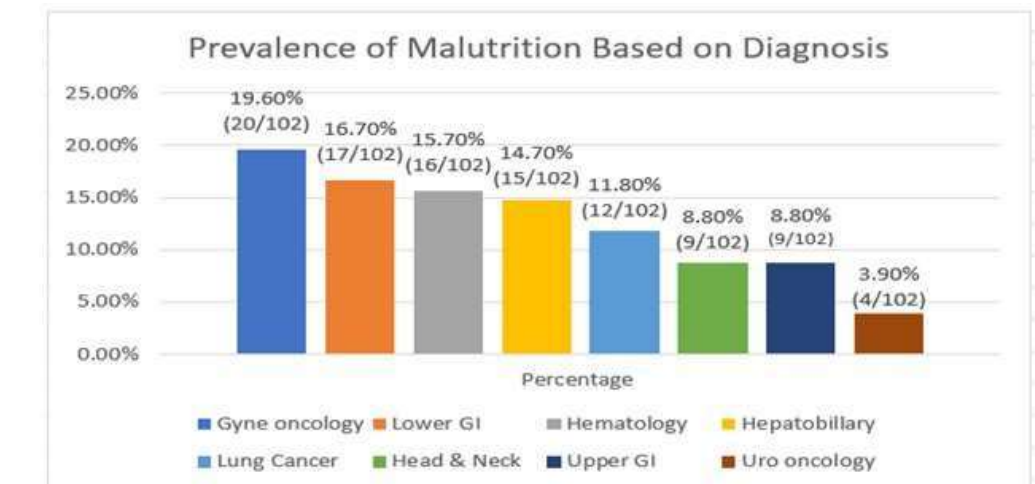


Figure 1. Prevalence of malnutrition based on types of cancer

### Conclusion

The project shows the impact of interventions on enhancing the nutritional well-being of cancer patients. It stresses the significance of nutrition screening and timely intervention, and the necessity for proper referral procedures to connect patients with dietitians within the DCU.

### References

- Maasberg, S., Knappe-Drzikova, B., Vonderbeck, D., Jann, H., Weylandt, K. H., Grieser, C., Pascher, A., Schefold, J. C., Pavel, M., Wiedenmann, B., Sturm, A., & Pape, U.-F. (2015). Malnutrition Predicts Clinical Outcome in Patients with Neuroendocrine Neoplasia. *Neuroendocrinology*, 104(1), 11–25. <https://doi.org/10.1159/000442983>
- Attar, A., Malka, D., Sabaté, J. M., Bonnetain, F., Lecomte, T., Aparicio, T., Locher, C., Laharie, D., Ezenfis, J., & Taieb, J. (2012). Malnutrition Is High and Underestimated During Chemotherapy in Gastrointestinal Cancer: An AGEO Prospective Cross-Sectional Multicenter Study. *Nutrition and Cancer*, 64(4), 535–542. <https://doi.org/10.1080/01635581.2012.670743>
- Pressoir, M., Desné, S., Berchery, D., Rosignol, G., Poiree, B., Meslier, M., Traversier, S., Vittot, M., Simon, M., Gekiere, J. P., Meuric, J., Serot, F., Falewee, M. N., Rodrigues, I., Senesse, P., Vasson, M. P., Chelle, F., Maget, B., Antoun, S., & Bachmann, P. (2010). Prevalence, risk factors and clinical implications of malnutrition in French Comprehensive Cancer Centres. *British Journal of Cancer*, 102(6), 966–971. <https://doi.org/10.1038/sj.bjc.6605578>