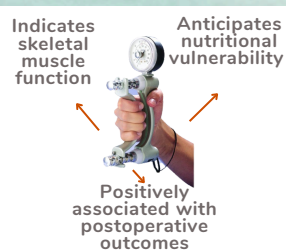
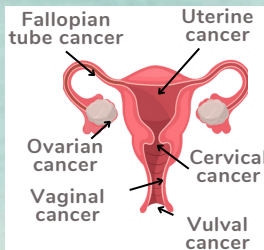


**INTRODUCTION**

- Gynecologic cancers (GC) are cancers that affect women's reproductive system.
- Postoperative GC patients have **higher protein requirement** to support anabolism, speed up wound healing process, enhance immunity and assure a better postoperative outcome.<sup>1</sup>
- Therefore, **enteral nutrition (EN)** should be provided early to ensure sufficient protein intake and preserve functional outcome indicated by handgrip strength (HGS).



**METHODOLOGY**

<p><b>Study Design</b> Cross sectional Study</p> <ul style="list-style-type: none"> <li>Initial audit</li> <li>Re-Audit</li> </ul>	<p><b>Inclusion Criteria</b> GC patients admitted to surgical wards and undergone elective surgery.</p>	<p><b>Data Analysis</b> Simple Descriptive Analysis</p>
<p><b>Population Size</b> All GC patients that undergone elective surgery within audit period (100%).</p>	<p><b>Exclusion Criteria</b></p> <ul style="list-style-type: none"> <li>On tube feeding within first 3 days of post-operative</li> <li>Patients with post-operative complications OR gastro-intestinal conditions OR hemodynamically unstable required to be kept nil by mouth.</li> </ul>	<p><b>Data Collection</b></p> <ul style="list-style-type: none"> <li>by audit team members (Dietitian)</li> <li>List of eligible patients obtained from Electronic Medical Record (EMR).</li> <li>Data on nutrition requirement and intervention as well as protein intake and hand-grip strength obtained from Dietetic Care Notes in EMR.</li> <li>Data were recorded in Excel data collection sheet.</li> </ul>

**1) Problem Statement**

Enteral nutrition (EN) should be provided within 24 hours of postoperative period except when noted presence of continued obstruction of GI tract, bowel discontinuity, increased risk for bowel ischemia, or ongoing peritonitis. (Medical Nutrition Therapy Guidelines for Critically Ill Adults, 2017)

**2) Criteria and Standard**

Criteria	Standard
1. Dietitians' adherence to initiate EN within 24 hours of post-operative for GC patients. <sup>2</sup>	100%
2. Percentage of patients with protein intake ≥60% requirement within first 3 days post-operative. <sup>3</sup>	95%
3. Percentage of patient with maintained or improved post-operative hand-grip strength. <sup>4</sup>	95%

Reaudit (Sept-Dec 2018)

**4) Remedial Measures**

**STEP 1: TRAINING TO DIETITIAN**

**DELAYED DIETITIAN REVIEW**

- Patient went for operation before ONS education given

- Enforcement of early post-operative oral feeding protocol.
- All GC patients undergoing elective surgery to be reviewed before operation.
- Remind dietitian in unit meeting to adhere seeing new cases within 24 hours admission.

**STEP 2: IMPROVE AWARENESS OF PATIENT**

**INDIVIDUAL LEVEL**

- Explain importance of early feeding to every patient prior surgery.
- Encourage patient to participate in patient's care.
- Involve family for support.

**PATIENT'S REFUSAL OR FEAR TO START ONS**

**SERVICE LEVEL**

- Multidisciplinary effort by approaching surgeon and medical officer to explain to patients.
- Surgical team to reinforce benefits of early feeding and ONS compliance towards post-operative recovery and avoid unnecessary fear.

**STEP 3: RESCHEDULE ONS SUPPLY TO WARD**

**LATE ONS SUPPLY TO WARD**

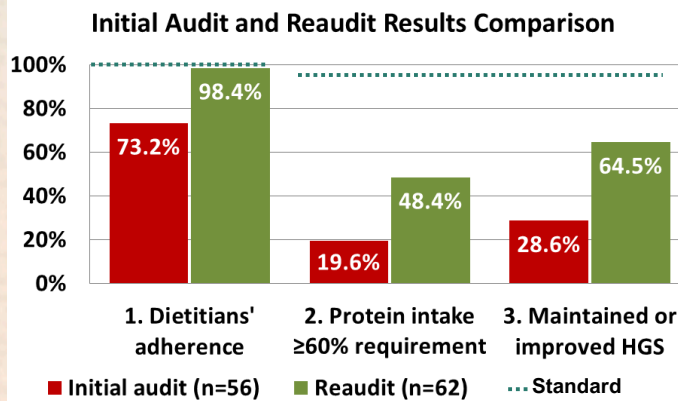
- Allowed feeding post-op after office hour and no ONS stock

- Dietitian to indent ONS stock once patient is admitted and reviewed pre-operatively.
- ONS stock will be stored in ward pantry so that respective staff nurses are able to serve ONS to patient even if feeding is allowed after normal working hours.

**References**

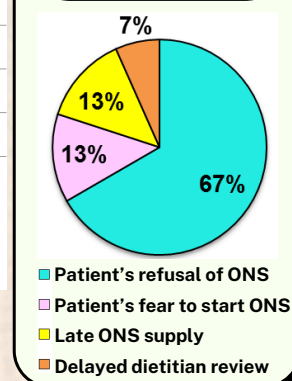
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**RESULT**



Initial Audit (March-June 2018)

**3) Reasons of Shortfall**



**DISCUSSION AND CONCLUSION**

- GC patients are often overlooked and assumed to be at a lower risk of malnutrition. However, current audit outcome and previous studies showed that they too are at risk of muscle loss (indicated by handgrip strength) if protein intake is insufficient due to delayed post-operative oral feeding.
- IKN practice early feeding protocol by providing clear liquid, fat free, whey-protein containing ONS to GC patients in the initial post-operative stage before diet transition to other diet types.
- Prompt communication with staff nurses are needed to ensure feeding regime and ONS stock are available with patient or in ward even before operation.
- Patient's refusal or fear is attributed to fear of vomiting or lack of knowledge on the importance of early and adequate oral intake especially protein.
- With appropriate remedial measures, dietitians' adherence has been improved resulting in higher protein adequacy and better functional outcome of handgrip strength where 64.5% of patients were able to maintain or improved their post-operative handgrip strength.

**RECOMMENDATION:** As patients tend to be more compliant after repeated explanations from different healthcare professional including doctors, dietitian and nurses, it is recommended for continuous education and reminders from dietitian to surgical team to ensure multidisciplinary approach in practicing this protocol for patients' benefit.

Acknowledgement: We would like to express our gratitude to ward nurses and IKN staffs who were involved directly and indirectly in this audit.