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Abstract Book
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A Randomized Controlled Trial on the Effect of Intermittent Gravity Drip on the Incidence of Hospital-acquired Pneumonia among Patients Admitted at the Intensive Care Unit of Ospital ng Makati
First Author: Maia Fae AQUINO

Purpose:
Primary: We sought to determine the effect of intermittent gravity versus bolus feeding on the incidence of Hospital-acquired pneumonia among patients admitted at the Intensive Care Unit of Ospital ng Makati Secondary: Our study also aims to determine the effect of intermittent gravity versus bolus feeding in terms of mortality and length of hospital stay

Methods:
We performed a randomized trial to examine the effectiveness of intermittent gravity as a strategy in reducing the incidence of pneumonia. We included patients requiring nasogastric feeding within 24 hours from admission. We randomly assigned patients using fish-bowl technique to either intermittent or bolus. The primary outcome was development of hospital acquired pneumonia. The secondary outcome was length of hospital stay and mortality.

Results:
One hundred six (106) were randomized into intermittent and one hundred four (104) in bolus. Baseline characteristics were similar. The primary outcome occurred in 55 of 104 patients (53%) in bolus and 21 of 106 patients (20%) in the intermittent (RR= 0.37; CI 0.23-0.60). Mortality occurred in 42 of 104 patients (41%) in bolus and 26 of 106 patients (25%) in the intermittent (RR=0.61; CI 0.39- 0.88). The average hospital stay for the bolus was 17 + 1 days compared to intermittent with 13 + 1 days.

Conclusion:
Patients receiving intermittent gravity had a lower rate of hospital-acquired pneumonia and mortality compared to those on bolus feeding. Likewise, there was significant difference on the length of hospital stay.

Assessment of Resting Energy Expenditure among Mechanically Ventilated Critically Ill Asian Patients at Different Phases of Critical Illness: Development and Validation of Predictive Equations
First Author: Pei Chien TAH
Co-Author(s): Bee Koon POH, Mohd Basri MAT NOR, Hazreen ABDUL MAJID, Chee Cheong KEE, Mohd Shahnaz HASAN

Purpose:
Previous predictive equations (PEs) for estimation of resting energy expenditure (REE) in critically ill patients have been developed among Caucasians and may not be applicable for Asians. Furthermore, indirect calorimetry (IC) is
unavailable in many settings. Therefore, this study aims to develop and validate PEs for estimation of REE at different phases of critical illness for adults from Asian origins.

Methods:
A prospective observational study was conducted. REE was measured among 294 [acute phase (<7 days)] and 180 patients [late phase (≥7 days)] by using IC. Multiple linear regression (MLR) was used to determine the metabolic determinants of REE and to develop the best PEs. The variables that were significantly associated with measured REE were entered into the model. Ten-fold cross-validation approach was used to develop and validate the PEs. The PEs with the highest r², lowest root mean square error (RMSE) and lowest standard error of the estimate (SEE) were selected.

Results:
In acute phase, the best PE for REE (kcal/day) was 891.6 (Height in m) + 9.0 (Weight in kg) + 39.7 (Minute Ventilation) - 5.6 (Age) – 353.5, with r²=0.442, RMSE=348.3, SEE=325.6. For late phase, the best PE for REE was 881.3 + 12.7 (Weight in kg) + 0.34 (Energy intake in the previous 24 hours) - 8.7 (Age), with r²=0.614, RMSE=409.9, SEE=329.9.

Conclusion:
The best PEs for acute and late phases for critically ill Asian patients were developed and validated. They are clinically more applicable to Asians than other PEs which were developed among Caucasians and/or during the acute phase only.

SF-000023

Laparoscopic colorectal cancer surgery reduces the adverse impacts of sarcopenia on postoperative outcomes: A propensity score-matched analysis
First Author: Chengle ZHUANG
Co-Author(s): Fengmin ZHANG, Xian SHEN, Zhen YU

Purpose:
Sarcopenia is a negative predictor for postoperative recovery. This study was performed to evaluate short-term outcomes of laparoscopic surgery in colorectal cancer patients with sarcopenia.

Methods: We conducted a study of patients who underwent curative surgeries for colorectal cancer in two centers from July 2014 to July 2018. In order to reduce the selection bias, we conducted the propensity score matching analysis. Preoperative characteristics including age, gender, anemia, BMI, hypoalbuminemia, America society of anesthesiology, epidural anesthesia, operative procedure, stoma, tumor location and combined resection were incorporated in the model, and produced 58 matched pairs. The third lumbar skeletal muscle mass, handgrip strength, and 6-meter usual gait speed were measured to define sarcopenia. Short-term outcomes were compared between two groups.

Results:
In a total of 1136 patients, 272 patients were diagnosed with sarcopenia, and finally 227 patients were further analyzed in this study. Among them, 108 patients underwent laparoscopic colorectal surgery and 119 patients underwent open colorectal surgery. In the matched cohort, the clinical characteristics of two groups were well matched. The laparoscopic group had significantly reduced overall complications (15.5% vs. 36.2%, p = 0.016) and shorter postoperative hospital stays (10.5 vs. 14, p = 0.027). Subgroup analysis of postoperative complications showed that the incidence of surgical complications (p = 0.032) was lower in laparoscopic group. Hospitalization costs (p = 0.071) and 30-day readmissions (p = 0.215) were similar between two groups.

Conclusion:
Laparoscopic surgery for colorectal cancer is a safe and feasible option with better short-term outcomes in patients with sarcopenia.
FP-000030

**Effect of ginger in the treatment of nausea and vomiting compared with placebo and vitamin B6 during pregnancy: a meta-analysis**

First Author: Youchun HU  
Co-Author(s): Adwoa N. AMOAH, Quanjun LYU

**Purpose:**
Nausea and vomiting (NV) during pregnancy (NVP) affect up to 85% of pregnant women, which has multiple effects on pregnancy outcome. Considering the potential teratogenic effect in fetus due to chemical drugs, ginger can be used to treat NVP. Reports have shown controversial results in reducing the severity of NV. Therefore, this meta-analysis aims to explore the effect of ginger in treating NVP compared with placebo and vitamin B6;

**Methods:**
The randomized control trials association with ginger and NVP were searched and identified in two database Web of science and Pubmed (up to April 2019). STATA software was used to conduct meta-analysis, including the source of heterogeneity exploration and assessment of the publication bias, p<0.05 was considered to be significant;

**Results:**
Thirteen studies involving 1174 subjects were included. The result demonstrated that ginger has significant effect on improving general symptom of NVP [OR=7.475, 95%CI= (4.133, 13.520)], relieving severity of nausea [SMD=0.821, 95%CI= (0.585, 1.056)], but not significant in reducing vomiting [SMD=0.549, 95%CI = (-0.268, 1.365)], compared with placebo. Besides, ginger has no significant effect on improving general symptom of NVP [OR=1.239, 95%= (0.495, 3.102)], relieving severity of nausea [SMD=0.199, 95%= (-0.102, 0.500)], reducing vomiting [SMD=0.331, 95%= (-0.145, 0.808)], compared with vitamin B6;

**Conclusion:**
Ginger significant relieve general NVP symptoms and nausea compared with placebo, but no significant effective on vomiting. Moreover, ginger is more effective than vitamin B6 in treating NVP, although, there were no significant difference. Further rigidly designed RCTs are needed to verify the effectiveness of ginger in treating NVP.

FP-000031

**Increased body mass index linked to greater short- and long-term survival in sepsis patients: a retrospective analysis of a large clinical database.**

First Author: Shuhe LI  
Co-Author(s): Xiaoguang HU, Jinghong XU, Fa HUANG, Li TONG, Changjie CAI

**Purpose:**
We investigated the impact of obesity (proxied as body mass index (BMI)), on short- and long-term mortality in sepsis patients.

**Methods:**
We conducted a retrospective analysis with adult sepsis ICU patients in a US medical institution from 2001 to 2012 in the MIMIC-III database. The WHO BMI categories were used. Multivariate logistic regression assessed the relationships between BMI and 30-day and 1-year mortality.

**Results:**
In total, 5563 patients were enrolled. Obese patients tended to be younger (P<0.001), to be female (P<0.001), to acquire worse SOFA scores (P<0.001), and to receive more aggressive treatment compared with their normal weight counterparts. Obese patients had notably longer mechanical ventilation periods and ICU and hospital lengths of stay (LOSs). In the final model, overweight and obese patients had lower 30-day (OR 0.77, 95% CI 0.66-0.91; OR 0.65, 95% CI 0.56-0.77, respectively) and 1-year (OR 0.83, 95% CI 0.71-0.96; OR 0.70, 95% CI 0.60-0.81, respectively)
mortality risks than normal weight patients. In contrast, underweight patients had worse 30-day and 1-year outcomes compared with normal weight patients (P=0.01, P<0.001, respectively). In morbidly obese, severe sepsis and septic shock patients, obesity remained protective.

Conclusion:
Obesity was correlated with short- and long-term survival advantages in sepsis patients.

SF-000050

Platycodin D Enhances FOXO3a by Inducting Akt Ubiquitination to sensitize prostate cancer cells to chemotherapy
First Author: Hongxia XU
Co-Author(s): Zongliang LU

Purpose:
The purpose of this study was to investigate the effect of Platycodin D (PD) on Akt/FOXO3 pathway and on the sensitization of Sorafenib.

Methods:
Western Blotting and RT-PCR were used to detect protein and mRNA of FOXO3a and Akt changes. CCK8, apoptosis, electron microscope, cloning formation, cell cycle and CFDA-SE analysis were used to detect the PD on the sensitization of Sorafenib. The inhibitors, shRNA and cDAN were used to determine the mechanism

Results:
PD activated FOXO3a and induced necroptosis through FOXO3a. PD induced ub-Akt to promote FOXO3a activation. After pretreatment with MG132 (Inhibition of ubiquitination), the effect of PD-induced ub-Akt was reversed. Pictilisbi (PI3K inhibitor) and mk-2206 (Akt inhibitor) demonstrate that PD promotes ub-Akt by promoting p-Akt. PD promotes sorafenib to induce apoptosis and to arrest cell cycle. Compare with Mock-PC3 cells, this effect was abolished in shRNA-FOXO3a PC3 cells. Then this effect was restored after pretreatment with cDNA-FOXO3a in shRNA-FOXO3a PC3 cells.

Conclusion:
Platycodin D enhanced FOXO3a by inducting Akt Ubiquitination to induced necroptosis. And PD promotes sorafenib to induce apoptosis and to arrest cell cycle by FOXO3a.

Oct 09, 2019 (Wednesday)

Free Paper - 1
09:00 - 10:30
S226-S227
Chair(s): Ravinder REDDY, Li Li CHANG

FP-000012

Indirect Calorimetry: Adhering to the International Gold Standard Approach to Optimize Energy Needs for the Mechanically-Ventilated ICU Patient
First Author: Pui Sze Grace LUI
Co-Author(s): Hiu Yan Sharon CHAN, Ho Yan Terry TING, Chi Yan WONG, Koon Ngai Philip LAM, Pui Yi TANG

Purpose:
Suboptimal nutrient provision is associated with malnutrition, prolonged ventilation days, increased length of stay and higher mortality rates in the ICU. Predictive equations for energy requirement estimation is inaccurate when
compared to the gold standard Indirect Calorimetry. This study tests the hypothesis that energy requirements estimated by a simplistic weight-based equation is significantly different from that measured by indirect calorimetry.

Methods:
This is a single-center, retrospective cohort analysis conducted in 12 mechanically ventilated patients aged >20 yrs who were admitted to the ICU between January 2016 to December 2018. Energy requirements estimated by a simplistic weight-based equation 25-30kcal/kg/day (ASPEN 2016 guidelines) were compared against measured energy requirements with indirect calorimetry using the Wilcoxon signed rank test.

Results:
The hypothesis was proven that there is a significant difference of 499±75calories/day (p<0.01) between estimated energy requirements with predictive equations compared to Indirect Calorimetry. Predictive equations significantly underestimated energy requirements and had low performance when compared to the indirect calorimetry method. There is a significant improvement of 38±11.25% (p<0.01) in energy provision after intervention- an improvement of 270±11.25calories/day (p<0.01). This result has led to a change of nutrition prescription in 83% of our analyzed patients.

Conclusion:
Predictive equation do not accurately estimate measured REE in this group of mechanically ventilated ICU patients, mostly underestimating energy needs. We recommend that indirect calorimetry method is needed to provide optimal nutritional delivery and care for mechanically ventilated ICU patients. Alternatively, development of improved predictive equations to assess energy needs is needed.

SF-000024

Myosteatosis predicts prognosis after radical gastrectomy for gastric cancer: a propensity score-matched analysis from a large-scale cohort

First Author: Chengle ZHUANG
Co-Author(s): Su-lin WANG, Xi WU, Xian SHEN, Zhen YU

Purpose:
Increasing evidence have suggested that sarcopenia is linked with cancer prognosis, but only limited data have focused on the impact of myosteatosis on cancer outcomes. This study evaluates the influence of myosteatosis on postoperative complications and survival in those patients who underwent radical resection of gastric carcinoma.

Methods:
Patients who underwent elective radical gastrectomy for gastric cancer and had CT images available were identified from a prospectively collected database between 2008 and 2013. Myosteatosis was diagnosed by the cutoff values obtained from the method of optimum stratification. To obtain 2 well-balanced cohorts for available variables influencing clinical outcomes, the myosteatosis group was matched 1:1 with nonmyosteatosis group by using a propensity score match.

Results:
Of 973 patients, 584 were matched for analyses. Compared with the nonmyosteatosis group, the myosteatosis group manifested significantly higher severe postoperative complications rates, shorter overall survival (OS), and disease-free survival (DFS). Before matching, multivariate analyses identified that myosteatosis was an independent risk factor for severe postoperative complications, and Cox proportions hazards model showed that myosteatosis was an independent predictor for shorter OS and DFS. In addition, subgroup analyses of each muscle phenotype showed that patients with both sarcopenia and myosteatosis had a poorer OS and DFS than other patients.

Conclusion:
Myosteatosis in gastric cancer is associated with poor prognosis. Classifying the skeletal muscle into subranges of radio density is a promising strategy to understand the impact of skeletal muscle on unfavorable surgical outcomes in gastric cancer patients.
**The ‘SUN’ Initiative: Is mNUTRIC score Associated with 28-day Mortality in Critically Ill Patients?**

First Author: Radha Reddy CHADA  
Co-Author(s): Sachin CHIDRAWAR, Bhagyasri GOUD, Anitha MASKA, Rajiv MEDANKI

**Purpose:**  
Traditional scoring systems are inadequate in ICU setting as sedated or unconscious patients are unable to provide nutritional information. We aim to explore if mNUTRIC (modified NUTrition RIsk in Critically ill) score is associated with outcomes in Indian population and to identify high-risk ICU patients who are most likely to benefit from nutritional intervention.

**Methods:**  
Prospective observational study of critically ill adults admitted for >24hrs to ICU of a tertiary-care hospital during a period of 7 months. Data was collected on mNUTRIC score, use of mechanical ventilation (MV), ICU and hospital length of stay (LOS). Nutritional adequacy from enteral/parenteral nutrition was assessed. Multivariable logistic regression analysis was used with 28-day mortality as the primary outcome.

**Results:**  
217 patients (63% (137) male, 37% (80) female, mean age 60 ±2.6 years, mean BMI 24.3±4.5kg/m2) were included. In univariate analysis, mNUTRIC score, and MV were associated with 28-day mortality. In multivariable logistic regression analysis, mNUTRIC score (Odds ratio, OR 2.098, 95% Confidence Interval, CI 1.92-2.29, p < 0.001), were associated with 28-day mortality. Median (IQR) nutritional adequacy was 0.50 (0.04-0.99). In patients with high mNUTRIC score (5-9), higher nutritional adequacy was associated with a lower predicted 28-day mortality. The predicted 28-day mortality among patients with high mNUTRIC score, was 57%, 38%, 26% when the adequacy was <0.5, 0.5-0.8, ≥ 0.8 respectively. This was not observed in patients with low mNUTRIC (0-4) score (effect modification, p interaction <0.001).

**Conclusion:**  
mNUTRIC score is independently associated with 28-day mortality. Increased nutritional adequacy may reduce the 28-day mortality in patients with a high mNUTRIC score.

**Interim Report of Early and Intensive Dietetic Intervention on the Nutritional Status of Nasopharyngeal Cancer (NPC) Patients Undergoing Radiotherapy (RT)**

First Author: Jenny SIT  
Co-Author(s): Ka Suen YUEN, Yen Ting LEUNG, Ivan Chak Hang HO, Vivien YU

**Purpose:**  
The aim of this study is to determine the impact of early and intensive dietetic intervention using a well-defined protocol and evaluate a range of outcomes including body weight, body composition, nutritional status, patient generated subjective global assessment (PG-SGA) and physical function.

**Methods:**  
Individual nutritional consultations were offered to NPC patients on RT following the protocol since 2018. Patients were seen by clinical dietitians before, during and 2 weeks after RT. Information on PG-SGA was collected and body composition was analyzed. Twenty-nine patients were complied with the protocol and selected for the study.

**Results:**  
Interim analysis showed that patients experienced significant weight loss from 65.34+/−14.06kg to 59.98+/−12.06kg (p<0.000) and Body Mass Index reduction from 23.75+/−3.69kg/m2 to 21.84+/−3.16kg/m2 (p<0.000) after the completion of RT. Weight loss (-5.36+/−5.67kg) was apparently lower than data from an observational study in...
Northern China showed a median weight loss of 6.9 kg in NPC patients undergoing RT. Muscle mass significantly (p<0.000) reduced from 47.68+/−8.63 kg to 43.96+/−7.27 kg (-3.41+/−3.42 kg muscle mass change). Serum albumin significantly dropped from 44.21+/−7.89 g/L to 40.96+/−4.51 g/L (p<0.036) after completion of RT. PG-SGA increased significantly (p<0.000) from 3+/−3 at baseline to 12+/−7 after treatment. As compared to Portugal’s data (PG-SGA score 19-24), our post treatment score was lower.

**Conclusion:**
From the study, the severity of weight loss was apparently lower than the data from Northern China and the post treatment PG-SGA score was less than Portugal’s data. An early and intensive dietetic intervention may bridge the nutrition gap and alleviate the decline of nutritional status.

**FP-000062**

**The Effect of Perioperative Medical Nutrition Care for Surgical Patients with Upper Gastrointestinal Cancers on Nutritional Status and Length of Stay: A Pragmatic Intervention**

**First Author:** Brian Tsz Yeung FAN  
**Co-Author(s):** Ivan Chak Hang HO, Eva YUEN, Vivien YU

**Purpose:**
Perioperative medical nutrition therapy has been widely recognised as an integral part of the surgical management of upper gastrointestinal cancers (UGI) for optimizing nutritional status and more importantly, clinical outcomes such as length of stay (LOS). This study investigated the pragmatic effect of a perioperative nutritional care protocol for surgical patients with UGI cancers on nutritional factors including percentage of energy intake in relation to requirement (EITR) and change in body weight (BW), and LOS.

**Methods:**
109 UGI cancerous patients undergoing surgical treatment in Queen Mary Hospital from 2013 to 2016 were analysed, of which 60 patients from 2015 onwards were under a well-defined nutrition care protocol, featuring a minimum of 1 session of pre-operative dietitian assessment, followed by 2 post-operative inpatient visits and 3 post-discharge follow-up at dietetics outpatient clinic up to 12 months. The remaining 49 patients were under usual care, before the protocol was established, where nutrition therapy was initiated upon request.

**Results:**
Compared to usual care, total post-operative inpatient (median±IQR: 3±3 vs 2±4 sessions, P<0.05) and outpatient (median±IQR: 2±3 vs 0±1 sessions, P<0.01) dietitian visits were significantly higher among patients under the protocol. Despite insignificant difference in the percentage of neither EITR nor change in BW, patients under the protocol had significantly shorter LOS than usual care (median±IQR: 13±10 vs 18±17 days, P<0.01).

**Conclusion:**
Our study demonstrated perioperative medical nutritional care protocol as part of surgical management was significantly associated with shorter LOS for patients with UGI cancers.

**SF-000080**

**Comparison of Nutritional Screening and Diagnostic Tools in Diagnosis of Severe Malnutrition in Critically Ill Patients**

**First Author:** Somwichate RATTANACHAIWONG  
**Co-Author(s):** Benjamin ZRIBI, Ilya KAGAN, Miriam THEILLA, Pierre SINGER

**Purpose:**
While various nutritional assessment tools have been proposed, consensus is lacking with respect to the most effective tool to identify severe malnutrition in critically ill patients.
Methods:
We conducted a retrospective study in an adult general intensive care unit (ICU) comparing four nutritional assessment tools: Nutrition Risk Screening (NRS), Nutrition Risk in Critically Ill (NUTRIC), and malnutrition criteria proposed by European Society of Clinical Nutrition and Metabolism (ESPEN) and American Society for Parenteral and Enteral Nutrition (ASPEN). These criteria were tested for their sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) in diagnosis of severe malnutrition, defined as Subjective Global Assessment (SGA) C.

Results:
Hospitalization records for 120 critically ill patients were analyzed. 60 (50%), 17 (14.2%) and 43 (35.8%) patients were classified as SGA A, B, and C, respectively. The sensitivity in diagnosis of severe malnutrition was 79.1%, 58.1%, 65.1%, and 65.1%, and specificity was 94.8%, 74.0%, 94.8%, and 98.7% for NRS, NUTRIC, ESPEN, and ASPEN, respectively. NRS, ESPEN, and ASPEN had higher PPV (89.5%, 87.5%, and 87.5%, respectively) and NPV (89%, 83%, and 83.5%, respectively) than NUTRIC (sensitivity 55.6% and specificity 76%). NUTRIC showed the highest correlation with mortality. None of the tools retained their correlation with mortality after adjustment for potential confounding factors.

Conclusion:
NRS showed the highest sensitivity and high specificity, PPV, and NPV. NUTRIC had least effective overall performance in diagnosis of severe malnutrition in an ICU setting. A larger population may be required to explore the association between mortality and these nutritional assessment tools.

Free Paper - 2
14:30 - 15:30
S226-S227
Chair(s): Renuka JAYATISSA, Peter CHAN

FP-000004

PREVALENCE AND ISSUES ASSOCIATED WITH HOME GARDENING AMONG SCHOOL TEACHERS OF SRI-LANKA
First Author: Chintha RUPASINGHE
Co-Authors: Shreenika DE SILVA WELIANGE

Purpose:
Home gardening is well known to ensure household level food security by increasing availability, affordability and accessibility to healthy food. This study was conducted to determine the prevalence and associated factors for home gardening among school teachers of Sri Lanka.

Methods:
A descriptive study was conducted among 618 school teachers in Kalutara district of Sri Lanka using random cluster sampling in 106 schools. A self administered questionnaire was used to collect data on socio demographic, occupational and factors related to home gardening among randomly selected teachers.

Results:
Majority of the study population was females [91.1%; n=563] and had working experience of 16-20 years [28.6% n=177]. Postgraduate qualified teachers were 38.5% [n=238] and majority belonged to the Grade 2 of the teachers service [49%, n=303]. Among the participants 45.2% [n=238] were maintaining a home garden. The main reason for not maintaining a home garden was not having spare time [33.4%, n=207] followed by not having enough space [2.4%, n=132].

Conclusion:
Prevalence of home gardening among school teachers was 45.2%. Main reasons for not maintaining a home garden were lack of time and space respectively. However the provide reasons might be arbitrary and further qualitative
analysis of the issue is recommended to evaluate the potential socio ecological factors, attitudes; beliefs and influences on home gardening practices at household level.

**FP-000011**

**Monitoring gaps in hospital nutrition practice: Rate of clinical dietitian orders carried out by physicians in a newly established nutrition support team**

First Author: Jon Jon CELESTINO  
Co-Author(s): Naheeda MUSTOFA

**Purpose:**
According to latest studies, effective nutrition management has a big factor in reducing patient mortality and hospital cost. Hospital malnutrition still remains to be a common undertreated problem. A multidisciplinary approach is the key to achieving nutrition goals among hospitalized patients which includes engaging physicians and clinical dietitians as part of a nutrition support team. In this newly established nutrition support team in a secondary hospital, we involved the hospital management, and created policies to enhance active ward rounds of clinical dietitians. Objective: To determine the rate of clinical dietitian management orders carried out by physicians in the wards

**Methods:**
A descriptive study where a specific monitoring form on carried out suggestions by clinical dietitian was utilized to track physician approvals. Data on diet modification, oral nutrition support (ONS), enteral tube feeding and parenteral nutrition management was gathered from January 2017-May 2019

**Results:**
Of the total of 421 patients seen, 76% (n=321) of clinical dietitian suggestions were approved and carried out. Majority of the cases evaluated by the clinical dietitian were on diet modification (n=210) and ONS (n=176), 50% and 42% respectively, while all suggestions for tube feeding referrals (n=32) were carried out. There were few parenteral nutrition referrals (n=3) which signals need for more physician-dietitian collaboration.

**Conclusion:**
A progressive need for policies on communication and continuous intervention monitoring is needed to achieve a hundred percent on physician-dietitian agreement in clinical nutrition management

**FP-000075**

**Undernutrition and clinical outcomes in hospital chronic obstructive pulmonary disease (COPD) patients**

First Author: Terry TING  
Co-Author(s): Edmond LUK, Hiu Yan Sharon CHAN, Chi Yan WONG

**Purpose:**
Studies suggest that 25% to 40% of COPD patients are undernourished. Malnourished COPD patients have been related to increasing complications, length of stay and increased mortality. This study is to investigate the prevalence of malnutrition risk, nutritional intake, and relevant clinical outcomes among a group of hospitalized COPD patients.

**Methods:**
Records of 180 COPD patients who have seen dietitian during the admission period from 1st Apr 2017 to 31 Mar 2019 were retrieved for analysis. Prevalence of malnutrition risk, protein and energy intake, mortality, length of stay (LOS) and the 28-day emergency readmission rate after discharge were compared among different risk groups.
**Results:**
The prevalence of malnutrition risk was 77.8%. The LOS of the patients with malnutrition risk was 59% longer than the low risk group (8.9±11.8days vs. 5.6±3.4days, p<0.05). The readmission rate was higher in the at-risk patients than in low-risk patients (37.5% vs. 20.0%, OR=2.44, p<0.05), as was the mortality rate (5.0% vs. 0%, OR 4.55, p<0.05). Eighty-eight patients have Body Mass Index (BMI) records, 60% of them were underweight (BMI ≤18.5m2), in which 26% were severely underweight (BMI≤16.0m2). One hundred fifty-six subjects have energy and protein intake records, the mean intakes were 839kcal and 37g respectively, meeting only 59% and 64% of their energy and protein requirements.

**Conclusion:**
The prevalence of malnutrition risk in COPD inpatient is high. Malnourished COPD patients are prone to have poorer clinical outcomes. A structured nutrition care program should be applied to all stages of the patient journey to improve clinical outcomes.
Cancer cachectic patient with good appetite tend to eat protein below recommendation: Study on Lung Cancer Cachexia Patients

First Author: Diana SUNARDI
Co-Author(s): Saptawati BARDOSONO, Noorwati SUTANDYO, Siti KRESNO

Purpose:
Cancer Patients, especially cancer cachectic, need to be fulfilled not only their energy requirement, but also their protein. The high acute phase protein and catabolism in cancer patients required a higher protein intake in order to maintain lean body mass.

Methods:
Subjects were newly diagnosed Lung cancer patients with cachexia, forty seven patients were taken consecutively at Dharmais Cancer Hospital. Food intake was taken using semiquantitative Food Frequencies Questionnaire and analysed with Nutrisurvey. Level of Appetite were taken by Visual Analog Score (VAS) and the risk for anorexia with Simplified Nutritional Assessment Questionnaire (SNAQ).

Results:
Over sixty percent of the subjects were still had a good appetite and around fifty percents of the subjects had a risk of having anorexia. Eighty percents had calories intake ≥ 25 Kcal/Kg/BW, but Almost fifty percent had protein intake below recommendation (<1.2 g/Kg/BW). Protein intake significantly associated with appetite (p=0.020), subjects with a good appetite were significantly eat protein less than recommendation compared to those with poor appetite.

Conclusion:
Among Cancer Cachexia patients, good appetite cannot ensured good protein intake. In order to fulfill the high protein requirement in cancer cachexia, protein supplementation with oral nutrition support or parenteral must be considered event though the patient has a good appetite.

Assessment of the nutritional status of a rural adult community in the dry zone, Sri Lanka

First Author: Hansani Madushika ABEWICKRAMA
Co-Author(s): Yu KOYAMA, Swarna WIMALASIRI, Mieko UCHIYAMA, Utako SHIMIZU, Rohana CHANDRAJITH

Purpose:
The objective of this work was to describe average nutritional status and physical activity (PA) of a rural adult population in the dry zone, Sri Lanka.

Methods:
A cross-sectional survey, including anthropometric measurements, and international physical activity questionnaire was conducted in a representative sample of 120 adults.
Results:
Majority of the study population consisted of women (68%) and 65% had only primary education. Monthly income was less than 30000 Sri Lankan rupee in 80% of them and all who drink alcohol and smoke cigarettes were male. Mean (SD) for body mass index (BMI), waist circumference (WC), waist to hip ratio (WHR), and waist to height ratio (WHtR) were 23.06(4.20) kg/m², 85.6(9.5) cm, 0.95(0.05), and 0.55(0.67), respectively. Significant differences were observed in height, body fat %, body muscle %, hip circumference, WHR, WHtR, and fat mass index between men and women (p <0.05). Among the study group, 36.8% were overweight, 13.3% were obese and 11.7% were underweight. Central obesity was observed in 59.2%, 97.5% and 74.2% of adults by WC, WHR, and WHtR, respectively. Central obesity by WC was significantly higher in women (p <0.001) while all men were centrally obese by WHtR. Of the 39.2% with normal BMI, 36.2%, 93.6%, and 61.7% were centrally obese by WC, WHR, and WHtR, respectively. Statistically significant difference was observed in PA level between gender, while more than half (53%) of the population had a high PA level.

Conclusion:
Despite high PA level, nearly half the population was overweight and obese and the majority was centrally obese.

SP-000017

The processed powder of Jerusalem artichoke (Helianthus tuberosus L.) tuber mixing in hospital enteral feeding formula for diarrhea patient in surgical intensive care unit
First Author: Kaweesak CHITTAWATANARAT
Co-Author(s): Suthat SURAWANG, Yaowalak POLBHAKDEE, Piyawan SIMAPAISAN, Kunchit JUDPRASONG

Purpose:
The Jerusalem artichoke (Helianthus tuberosus L.) is a tuber crop and has the components of soluble fiber. The objective of this study was to find the processed method of Jerusalem artichoke fiber into powder and tested the physical properties and dietary fiber components as well as the pilot clinical use in diarrhea patient in SICU.

Methods:
The Jerusalem artichoke tuber was processed into 600 micrometers in size. The dietary fiber components of processed powder were analyzed. Regarding the clinical pilot, the selected diarrhea patient in SICU was received of 2 g/dL of feeding formula for 5 days. The daily diarrhea score was recorded. The diarrhea was defined when the King's stool chart score ≥ 12.

Results:
The swelling of artichoke powder particle was very low (0.6 – 0.7 RVU). The component of dietary fiber was 20.8 – 21.6% and fructans (inulin and oligofructose) 66.0 – 71.5%. After administration formula in 11 patients who suffering from diarrhea [median of score (interquartile range) 18 (12 – 26)], the diarrhea was improve (diarrhea score < 12) in 7/11 patient (63.6%) at the 5th day. The effect of improving was begin at 2nd day [diarrhea score : 15 (8-32); p=0.03] and significant improve at 4th and 5th day [ 9(5 –24); p<0.01 and 8(5 – 24); p<0.01 respectively]. There were no report of vomiting and tube clogging. Three patients had the high GRV (>200 mL)

Conclusion:
The processed powder of Jerusalem artichoke tuber mixing in hospital enteral feeding formula might be improve the diarrhea score.
Malnutrition survey and profile of outpatient cancer patients in a tertiary hospital in Laguna, Philippines: A preliminary report

First Author: Anna Mae PEñA-CINCO
Co-Author(s): Naheeda MUSTOFA

Purpose:
This study presents a malnutrition profile of cancer patients after the new outpatient service in clinical nutrition was recently developed in the institution. Objective: This study aims to present the demographic profile, cancer type and nutritional profile of cancer patients seen at the Nutrition Intervention Management Service (NIMS) between April to June 2019

Methods:
This is a descriptive study conducted on ambulatory walk-in cancer patients and nutritional status were identified through body mass index and body composition measurements using the Karada Scan. Data are presented as mean ±SD and percentage distribution.

Results:
A total of 45 adult patients were seen with mean age of 56 ± 12.45, the youngest being 32 years old. Almost all were female (93.3%) and had breast cancer (84.4%). Other type of cancers identified (15.60%) include colon, lung, neck, colorectal, lymphoma, and nasopharyngeal cancer with frequency of cancer stages of I (11%), II (20.9%), III (37.8%) and IV (22.2%), respectively. The average height (152 cm ± 8.63) and weight (54.62 ± 10) were measured. Average BMI was 23 ± 4.25, percentage skeletal muscle was 35.45 ±4.9 (normal) and bone density (kg) was 2.48 ±0.4 (normal). The Karada scan used also measured the resting metabolism in kcal with an average of 1156 ±209 and percentage body fat (22.36 ±8) with 16 patients (35.6%) presenting below normal results.

Conclusion:
This study shows an alarming rate of cancer presence in the area. Majority of cancer patients had breast cancer and had normal nutritional status findings except on body fat percentage.

Association of the Nutritional Status with One-year Survival Rate of Cancer Patients seen at an Out-Patient Nutrition Clinic in a Private Tertiary Hospital: A Two-year Retrospective Cohort Study

First Author: Frances Gail TURALBA
Co-Author(s): Jesus Fernando INCIONG, Divina Cristy REDONDO-SAMIN, Luisito LLIDO, Reynaldo SINAMBAN, Carla Faye DE VERA

Purpose:
Malnutrition in cancer patients directly affects clinical outcomes. In the Philippines, not all cancer patients are routinely referred for nutritional assessment and intervention prior to or during the course of cancer treatment. This study was done to determine the association of the nutritional status and profile of cancer patients seen at an outpatient Nutrition Clinic with one-year survival rate.

Methods:
This is a two-year retrospective cohort study wherein chart reviews of 104 cancer patients were done. 87 patients had data on living status after 1 year from first out-patient nutrition consult. Statistical analyses were used to associate one-year survival rate with nutrition parameters.

Results:
BMI, presence of poor appetite and weight loss, initial calorie and protein intake, initial calorie intake compared to
Total Caloric Requirement (TCR), and timing of nutrition support had no significant association to survival. In the multivariate analysis, both initial protein intake compared to Total Protein Requirement (TPR) (OR=6.46; 95% CI=0.99 – 40.23; p=0.05) and adequacy of calorie and protein intake on first follow-up (OR=5.45; 95% CI=0.99 – 31.10; p=0.05) were found to be significantly associated to survival.

**Conclusion:**
Nutritional status based on BMI alone showed no significant association with one-year survival rate. Considering other nutrition parameters, there is a higher chance for survival of cancer patients with initial protein intake that is equal or more than the estimated TPR, as well as adequate calorie and protein intake on their first out-patient follow-up. This study emphasizes the need for early comprehensive nutrition assessment and intervention commencing in the out-patient setting.

**SP-000025**

**Beneficial effects of a nutritional intervention in disabled homebound elderly with risk of Malnutrition**

**First Author:** Mei Chih TSAI

**Purpose:**
The objective of this research study is mainly to understand the effectiveness of the improvement of the nutritional status of the elderly after the intervention of the dietitians.

**Methods:**
This study is based on a patient who has undergone a 10-year-long-term care program, but transferred to the care of a dietitian. Within four months, nutritional assessments, diet guidance, and nutritional education are conducted three times. During this period of time, information collected includes: Mini Nutritional Assessment (MNA), anthropometric measurements, calorie intake, protein intake.

**Results:**
After the third visit, the average total caloric intake has increased to 1360±250.16 Kcal, p<0.001, which has an statistically significant differences. However, after the third visit, the average protein intake has increased to 56.96±17.8g, p<0.001, which has an statistically significant differences. Regarding final MNA, before and after nutritionists got involved, the average MNA scores were 14.85±5.08 points versus 19.03±4.2points(p<0.001). At the first visit, there were 18 malnourished elders with a MNA score <17, which was 60% of the study group. After intervention, it was reduced to elders, which was 26.6% of the study group. MNA reached statistically significant differences, but there was no statistical difference on mid-arm circumference(MAC) and calf circumferences(C. C) before and after the intervention of nutritionists.

**Conclusion:**
After three months of continuous and proper nutritional care and education, the nutritionists gave helpful guidance to selecting the right diet and formula, which helped increased the elderly’s caloric and protein intakes.

**FP-000026**

**THE EFFECTIVE TREATMENT IN ACUTE STROKE PATINES USING LOW GRYCEMIC INDEX/LOW GRYCEMICLOAD NUTRIENTS**

**First Author:** Kotaro MORITA

**Purpose:**
It is well known that the potential malnutrition and the impaired glucose tolerance cause poor prognosis in stroke patients. For improving this issues, intensive glucose management using low grycemic index (GI) and low grycemic load (GL) nutrients for acute stroke and its efficacy was investigated.
Methods:
Acute stroke patients admitted from Oct 2017 to May 2018 were applied original dose-escalating protocol (100-600Kcal/7days) using Glucerna REX® as low GI/low GL nutrient. Blood sugar (BS) was measured for 15days, BS variability and side effect were observed.

Results:
42 patients including 20 hemorrhagic stroke and 22 ischemic stroke (mean age 77±14, male 16). On admission, BS>144mg/dL or HbA1c>6.0% patients % were 40 and 31 respectively. Treatment started 1.6 day in average, mean BS was 140±7mg/dL in 1-7 day, 132±4 mg/dL in 8-15 day, respectively. mean daily glycemic variability were 129±27 mg/dL. No major side effect as hypoglycemia, vomit, aspiration pneumonia was observed. BW reduction during the treatment was within 5%.

Conclusion:
Our original protocol achieve a good BS control of the patients in acute stroke phase safely, and low GI/low GL nutrients may have a potential for good outcome of stroke patients.

SP-000027

The Effect of ONCE Dialyze Formula as an Oral Supplement on Nutritional Status among Peritoneal Dialysis Patients
First Author: Natthida BOONYAGARN

Purpose:
To investigate the effects of Otsuka Nutrition Pharmaceutical (ONCE) dialyze formula (ODF) with dietary counseling on the nutritional status among inadequate protein and energy intake with hypoalbuminemia CAPD patients for 15 days.

Methods:
30 CAPD patients had serum albumin level <3.8 g/dL, energy intake between 20 - 25 kcal/kg/day and protein <1 g/kg/day were included. Energy intakes were determining using 3 – day food record and INMUCAL program. Biochemical analysis including plasma concentration of glucose, hemoglobin, creatinine, BUN, calcium, phosphorus, magnesium, albumin, pre-albumin and urine were collected before and at the end. Pair T-test and Wilcoxon were used to compare mean changed before and after. ANOVA with Bonferroni test were used for pos hoc analysis.

Results:
30 Thais’ hypoalbuminemia CAPD were males (39.4%) at the mean age at 61.9±12.3 years old and BMI at 21.3±2.8 kg/m2. Total energy and protein intake was significant increase from 21.1±6.29 to 27.1±6.7 kcal/kg/day (p<0.001) and 0.9±0.3 to 1.1±0.3 g/kg/day (p<0.001) respectively. BUN (45.8±13.9 and 49.9±15.9, P = 0.005), prealbumin (33.8±11.1 and 35.4±10.1 P =0.008) and body weight (53.7±9.5 and 54.5±9.2 P=0.017) were significantly increased. The percentage of modified SGA scored B group decreased 6% and body weight in this group was significant increase (P=0.011).

Conclusion:
This oral specific renal replacement therapy formula was safe and effective to improve nutritional status and body weight in continuous ambulatory peritoneal dialysis patients.
Prevalence of malnutrition based on GLIM criteria in hospitalized older adults

First Author: Keisuke MAEDA
Co-Author(s): Yuria ISHIDA, Tomoyuki NONOGAKI, Naoharu MORI

Purpose:
The Global Leadership Initiative on Malnutrition (GLIM) released new criteria for diagnosing and grading malnutrition. The purpose of this study was to report the prevalence of malnutrition based on GLIM criteria.

Methods:
This study included consecutive 2,374 older adult patients (aged ≥70 years) admitted to a university hospital between May and August 2018. All patients were screened using Mini Nutritional Assessment Short Form (MNA-SF). Of these, 678 patients who underwent nutritional assessment by a nutrition support team after screenings proceeded to diagnose malnutrition based on GLIM criteria. Further, prevalence of malnutrition of all patients was estimated according to the frequency of patients at risk of malnutrition and results from nutritional assessments by the team. Additionally, patients diagnosed with malnutrition were classified as having moderate or severe malnutrition proposed from GLIM criteria.

Results:
Mean age of the subjects were 77.2 ± 5.2 years with 57.9% men. At risk of malnutrition were identified 995 (41.9%) patients based on MNA-SF ≤ 11 points. Of patients with nutritional risk who underwent professional nutritional assessment, 15.6%, 56.0%, and 52.7% of them revealed weight loss, low body mass index, and reduced muscle mass (phenotypic criteria), respectively. Further, 62.1% and 63.0% of them revealed low intake and disease burden (etiologic criteria), respectively. Finally, estimated prevalence of malnutrition was 25.7% and those of severe malnutrition was 12.6%.

Conclusion:
This would be the first study reporting prevalence of GLIM-defined malnutrition in Asian population.