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# The effect of nutritional parameters on the prognosis of childhood interstitial lung diseases

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#### Introduction

- Data on malnutrition and feeding difficulties in childhood interstitial lung diseases (chILD) are scarce.
- There is not enough data on the relationship between nutritional status and pulmonary exacerbations, pulmonary function tests, severity of the disease in chILD.
- Also there is a need for nutritional therapeutic approaches (e.g Vitamins, supplements, special formula) in chILD.
- The aims of this study are to evaluate malnutrition status in different chILD subgroups and to investigate factors leading to poor nutritional status.

## Methods

- Data source from the Kids Lung Register.
- · From baseline and follow-up data we analyzed.
- > Nutritional parameters,
- Severity scores,
- > Treatment modalities.
- Pulmonary function test data (ppFEV1 and ppFVC)
- Disease severity (using Fan severity score)
- Malnutrition was defined as body weight/height zscore < -1.0 (for patients < 2 years) and body mass index (BMI) z-score < -1.0 for children > 2 years.

## **Results**

- In 23 countries data of 3334 register visits from 759 children were included.
- · 408 (53.8%) of the children were female.

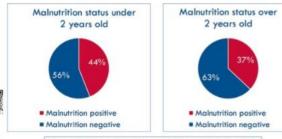
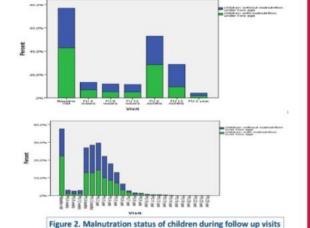
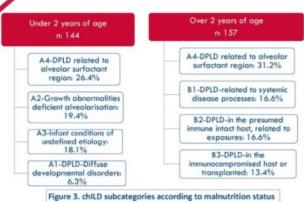


Figure 1. Malnutration status of children at baseline visit



#### Results



- Relationship of Malnutrition with Disease Severity
- Under 2 years of age;
- Other comorbid conditions (renal, intestinal, nervous system, thyroid disease) were higher.
- Disease severity was higher in children with malnutrition (p<0.001).</p>
- There was a moderate, negative correlation between weight z score and respiratory rate z score (r: -0.31, p<0.001).</p>
- Over 2 years of age;
- Disease severity was higher in children with malnutrition (p<0.001).</p>
- There was a weak negative correlation between BMI z score and respiratory rate z score (r:-0.24, p:0.01).
- Pulmonary function test results were lower in children with malnutrition.



- chILD subgroup related to alveolar surfactant region has the most common malnutrition rate in our cohort.
- Malnutrition is significantly related with disease severity, respiratory rate z score and pulmonary function tests according to our results.
  Further studies are needed to determine fearly nutritional intervention improves the prognosis of patients with chILD.

