# The Belgian Registry of Pediatric Crohn's disease (BELCRO): growth status after 3 year follow up

**E. De Greef**[1], J.M. Mahachie John[2], I. Hoffman[3], F. Smets[4], S. Van Biervliet[5], P. Bontems[6], I. Paquot[7], P. Alliet[8], K. Van Steen[2], G. Veereman[1], [1]UZ Brussel, Pediatric Gastroenterology, Jette, Belgium, [2]Montefiori Institute, Systems and Modelling Unit, Liege, Belgium, [3]UZ Gasthuisberg, Pediatric Gastroenterology, Leuven, Belgium, [4]UCL St Luc, Pediatric Gastroenterology, Brussels, Belgium, [5]UZ Gent, Pediatric Gastroenterology, Gent, Belgium, [6]HUDERF, Pediatric Gastroenterology, Brussels, Belgium, [7]CHC de l'espérance, Pediatric Gastroenterology, Liège, Belgium, [8]Jessa Hospital, Pediatric Gastroenterology, Hasselt, Belgium

## Background

The BELCRO cohort was initiated in 5/2008 to prospectively study newly diagnosed pediatric Crohn's disease patients. Here we report on growth outcome at 3 y follow up.

## Methods

Data from the BELCRO database were evaluated at diagnosis (M0), after 24 (M24) and 36 months (M36). Cross sectional analysis at M36, longitudinal analysis and cluster profile analysis from M0 to M36 were performed on the growth data obtained. Hypotheses were tested at 5% significance.

## Results

At M 36, consecutive data for BMI and height z-scores was available in 67 and 75 patients respectively. Disease severity went from 5% inactive, 19% mild and 76% moderate to severe at M0 to 70% inactive, 24% mild and 6% moderate to severe at M36. Median BMI z-score was −0.11 (range −3.38 to 2.01) and median height z-score was 0.13 (range −2.03 to 2.3). Five patients (7%) had height z-score and 19 patients (28%) BMI z-score <−2SD at M0. At M36, 0/5 and 5/19 remained <−2SD. Even though 75% of BMI z-scores and 93% of height z-scores remained within normal ranges (>−2SD <2SD) at diagnosis, 66% of patients improved their BMI z-score and 43% their height z-score over 36M resulting in 91% of BMI z-scores between normal ranges at M36 and 97% for height z-scores. Patients diagnosed and followed by adult physicians had significantly better height z-scores at M0 which remained at M36 (P = 0.027). L3 or L4A involvement imply a worse height z-score at M 36 (p = 0.02; p = 0.02). Only BMI z-score and height z-score at diagnosis and M24 predicted respectively the BMI z-score and height z-score at M36. Patients with inactive disease at M36 on Immunomodulator monotherapy had a better height z-score at M 36 (p = 0.006).

## Conclusion

The majority of patients had severe disease at diagnosis, but few of them had severe growth retardation. An increase in z-scores for BMI and height is noticed in a large group of patients. Disease location and growth status at diagnosis seems to influence height z-scores at M36.