



## Nutritional Assessment in Cystic Fibrosis Patients( Iran and Newzeland)

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### **Introduction:**

Patients with Cystic Fibrosis have increased risk of malnutrition. Early detection of nutritional deterioration enables prompt intervention and correction.

The aims of this project were to:

- Define the nutritional status of CF patients in Iran and New Zealand
- Compare and contrast the MacDonald Nutritional Screening tool with the Australasian guidelines for Nutrition in Cystic Fibrosis
- Validate these results in comparison with patient's evaluation by their CF clinical team.

### **Materials and Methods:**

69 CF patients (2-18 years) were assessed during routine outpatient visits over one year. Anthropometric measurements were obtained. Both tools were applied for each patient and the results compared to their clinical evaluation (as gold standard) with calculation of specificity and sensitivity.

### **Results:**

Under-nutrition was more frequent in Iranian than NZ patients (39% versus 0%,  $p=0.0001$ ), whereas over-nutrition was more prevalent in NZ children (9% versus 17%,  $p=0.05$ ). At the first visit, MacDonald and Australasian guidelines were able to recognize 77% and 61% of under-nourished Iranian patients, respectively. The mean sensitivity and specificity for all visits for the MacDonald tool were 83% & 73% (Iran) and 65% & 86% (NZ). Sensitivity and specificity for the Australasian guidelines were 79% & 79% (Iran) and 70% & 90% (NZ).

### **Conclusions:**

Both tools successfully recognised patients at risk of malnutrition. The MacDonald tool had comparable sensitivity and specificity to that described previously, especially in Iranian patients. This tool may be helpful in recognizing at risk CF patients, particularly in developing countries with fewer resources.

**Key words:** Iran, Cystic Fibrosis Patient, Newzeland, Nutritional Assessment.

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