



# Responsiveness and minimal clinically important difference of a specific health related quality of life (HRQoL) questionnaire for home enteral nutrition (HEN) patients: NutriQoL<sup>®</sup> questionnaire

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## RATIONALE AND OBJECTIVE

Home enteral nutrition (HEN) is a nutritional support technique that complements the therapeutic approach of those whom, by their clinical status or underlying disease, are at risk of malnutrition. As a result hospitalizations and morbidities decrease and improve the patient's Health Related Quality of Life (HRQoL)<sup>1,2,3</sup>. Specific instruments for assessing HRQoL in patients receiving HEN are not available. For this reason, developing a specific questionnaire for measuring HRQoL in patients receiving HEN became necessary.

**The aim is to determine NutriQoL<sup>®</sup> responsiveness and minimal clinically important difference (MCID) in patients receiving HEN.**

## METHODS

NutriQoL<sup>®</sup>, a specific questionnaire, developed and validated in Spain, for the assessment of HRQoL in patients receiving HEN regardless of the underlying condition and administration route, was given to a prospective cohort from 4 Spanish hospitals. It includes 17 pairs of items of HEN-related HRQoL grouped into two dimensions:

- 1) physical functioning and activities of daily living
- 2) social life aspects

NutriQoL<sup>®</sup> score range from -51 (worst HRQoL) to 51 (best HRQoL).

In addition, a visual analogue scale (VAS) and one item of overall HRQoL were included to obtain a general perception of the health condition after the introduction of HEN, from the patient's perspective.

NutriQoL<sup>®</sup> was completed three times within 1-month ( $\pm 15$  days) intervals (visit 1/visit 2/visit 3). Responsiveness was assessed by estimating the effect size and the mean standardized response between visits 1 and 3 ( $\leq 0.20$ :low;  $0.50$ :moderate;  $\geq 0.80$ :high responsiveness). For MCID calculation an anchor-based approach was performed. Interquartile range NutriQoL<sup>®</sup> score change from patients, who reported modifications in their health-status (worse or better) between visits 2 and 3, was used.

## RESULTS

A total of 86 subjects who presented clinical changes between visits participated [63% male; mean (SD) age 61 (13)]. Cancer was the main diagnosis leading to HEN prescription (66.3%).

NutriQoL<sup>®</sup> scores were 16.98 (14.57), 16.63 (14.86) and 18.92 (15.25) for visit 1 (Figure 1), 2 and 3 (Figure 2), respectively, with significant differences between visit 1 and 3 ( $p < 0.05$ ).

Figure 1. NutriQoL<sup>®</sup> total score results VISIT 1

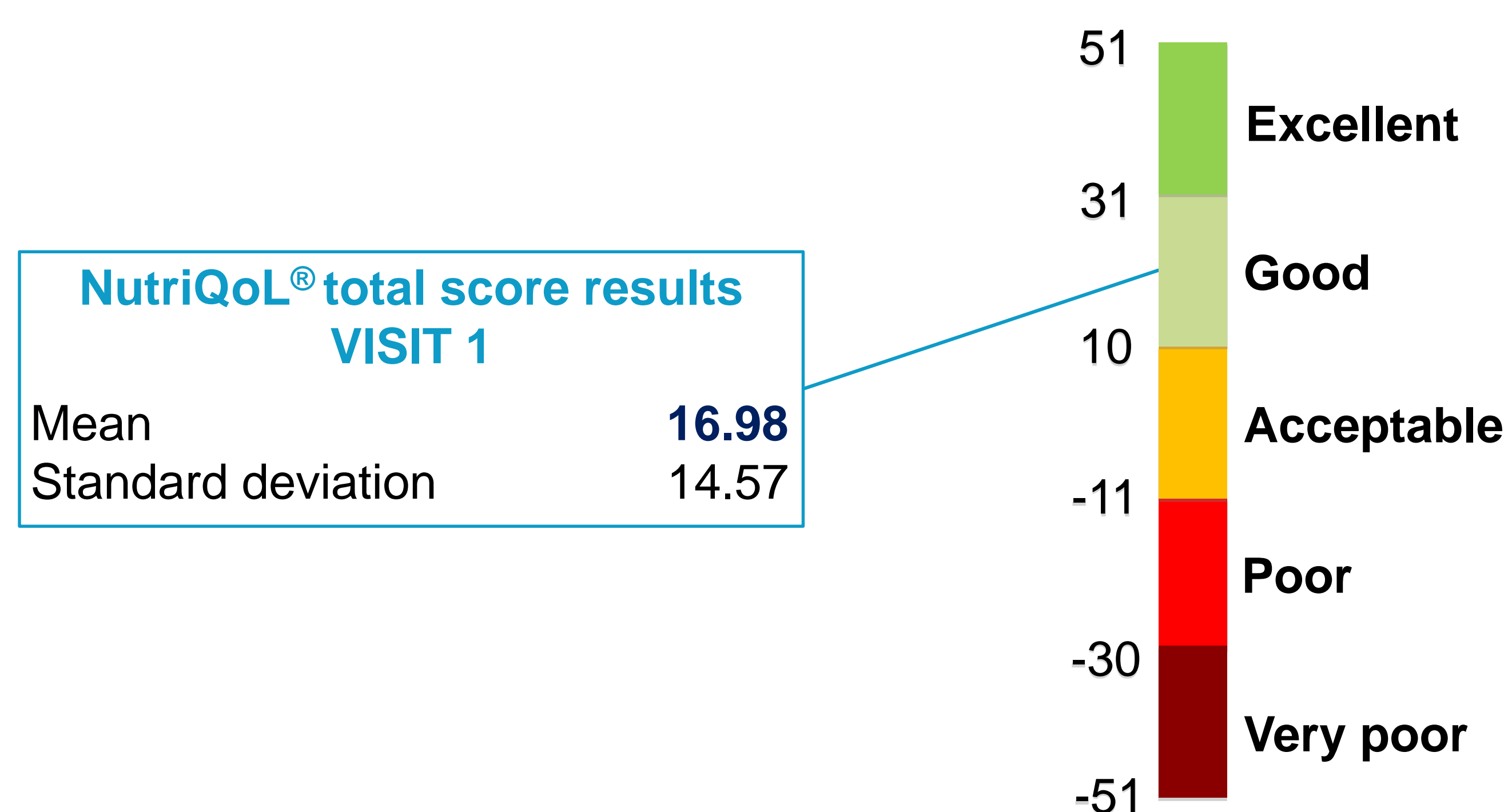
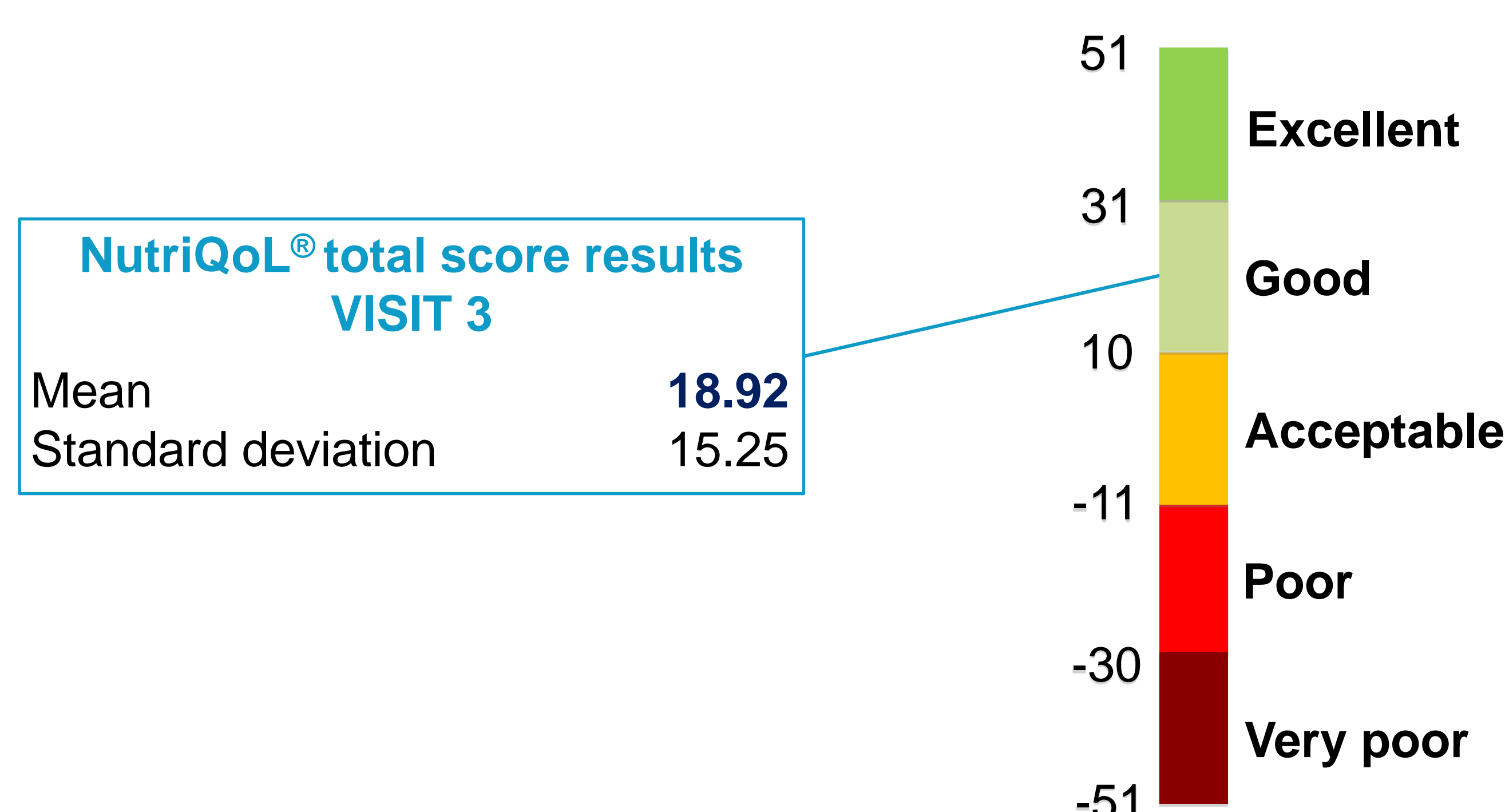


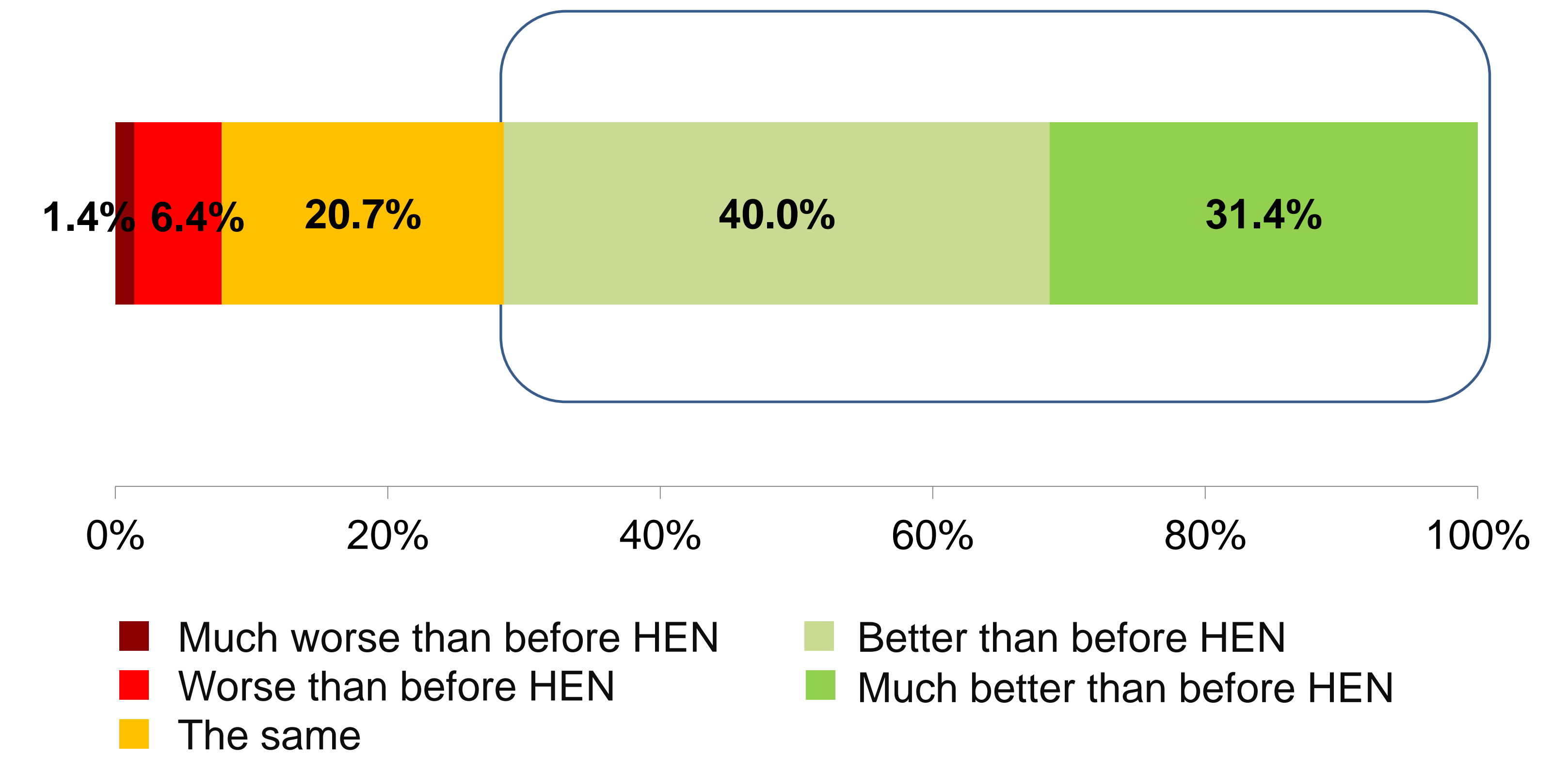
Figure 2. NutriQoL<sup>®</sup> total score results VISIT 3



Up to 71.4% of patients referred HRQoL improvements since the introduction of HEN (Figure 3) according to the item of overall HRQoL.

Figure 3. NutriQoL<sup>®</sup> 1 item of overall HRQoL score results

Considering my health, since I began taking HEN my quality of life is...



NutriQoL<sup>®</sup> has a moderate capacity for detect real variations in patients' health condition (Table 1).

Table 1. NutriQoL<sup>®</sup> responsiveness tests results

NutriQoL Dimension	Effect size between visit 1 and 3	Mean standardized response between visit 1 and 3
Physical functioning and activities of daily living	0.18	0.19
Social life aspects	0.25	0.22
<b>NutriQoL<sup>®</sup></b>	<b>0.23</b>	<b>0.24</b>

Regarding MCID, NutriQoL<sup>®</sup> total scores difference between visit 2 and 3 in those patients that perceived changes in their health status was between -3.75 and 4.25 (interquartile range) (Table 2).

Table 2. NutriQoL<sup>®</sup> MCID tests results

Visit 3-Visit 2	n	Mean	SD	Q1	Median	Q3
Worse	6	-5.17	10.52	-11.00	0.00	0.25
The same	12	2.00	11.21	-5.50	0.00	8.50
Better	24	2.08	11.50	-3.00	1.00	5.75
<b>Reported changes</b>	<b>30</b>	<b>0.63</b>	<b>11.51</b>	<b>-3.75</b>	<b>0.00</b>	<b>4.25</b>

## CONCLUSIONS

NutriQoL<sup>®</sup> responsiveness is moderate. This may be due to the limited temporal period between visits since most of patients referred improvements in their condition. A difference of  $\pm 4$  points on NutriQoL<sup>®</sup> total score regarding a previous administration demonstrates a clinical change that affects patients HRQoL.

## REFERENCES

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