

# Assessment of nutritional status in haemodialysis patients using PG-SGA and handgrip strength

# M.J.F. Kuijken<sup>1</sup>, S. Lichthart<sup>1</sup>, L.A. de Wit – van der Werf<sup>2</sup>, M.P. Donders<sup>2</sup>, A.E.P. van Gastel<sup>2</sup>, G.H. van den Berg<sup>1</sup>, H. Jager–Wittenaar<sup>3</sup>

<sup>1</sup>Institute of Health, HAN University of Applied Sciences, Nijmegen, <sup>2</sup>Nutrition and Dietetics, Máxima Medical Centre, Veldhoven, <sup>3</sup>Research Group Healthy Ageing, Allied Health Care and Nursing, Hanze University of Applied Sciences, Groningen, Netherlands

#### Rationale

In this cross-sectional study, we primarily aimed to assess prevalence of malnutrition by the Patient-Generated Subjective Global Assessment (PG-SGA), and muscle strength in haemodialysis patients. Second, we explored to which extent these patients are able to complete the patient component of the PG-SGA, aka PG-SGA Short Form (SF) (weight, intake, symptoms, activities/functioning) independently.

#### **Methods**

In 66 patients (aged 72±12 years; 64% male) of the Máxima Medical Centre, The Netherlands, the PG-SGA paper version (n=62) or Pt-Global webtool (n=4) was used. Patients were categorized into Stage A: Well nourished, Stage B: Moderate or Suspected malnutrition, or Stage C: Severe malnutrition. Muscle strength was assessed by hand grip strength (HGS) in the arm without the shunt, using the maximum of three scores. A HGS <85% of reference value (Webb) was considered low. Patients were asked if they were able to complete the PG-SGA SF independently or whether they needed

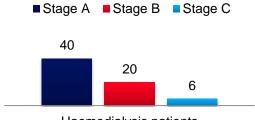
#### Results

According to the PG-SGA, 61% of the patients were classified as Stage A, 30% as Stage B, and 9% as Stage C (figure). Median PG-SGA numerical score was 4 points and 26% of the patients scored ≥9 points (table).

73% of the patients had low HGS, of which 31% were classified as Stage B or C.

In contrast to all four patients using the Pt-Global webtool, 66% of patients using the paper version needed assistance with completing the PG-SGA SF, mainly because of not being able to write due to the shunt, or visual impairment.

## Categorization PG-SGA



Haemodialysis patients

		Stage A	Stage B	Stage C	Total
PG- SGA numeric al score	0 – 1	4	0	0	4
	2-3	22	2	0	24
	4 – 8	14	7	0	21
	≥9	0	11	6	17

## Conclusion

More than one-third of haemodialysis patients were malnourished or suspected to be malnourished and in about one-quarter the PG-SGA numerical score indicated critical need for improved symptom management and/or nutrient intervention options. Frequency of low HGS was higher than that of malnutrition. Use of the PG-SGA and HGS provides a complete assessment of nutritional status in haemodialysis patients.



