

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

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## 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.

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.

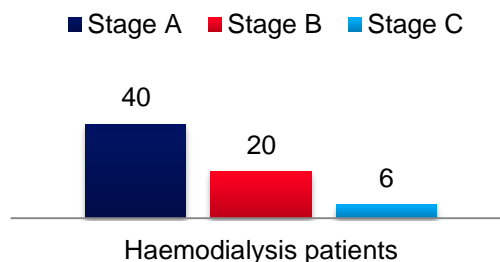
## Methods

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 assistance.

## 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).

Categorization PG-SGA



|                      | Stage A | Stage B | Stage C | Total |
|----------------------|---------|---------|---------|-------|
| PG-SGA numeric 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.