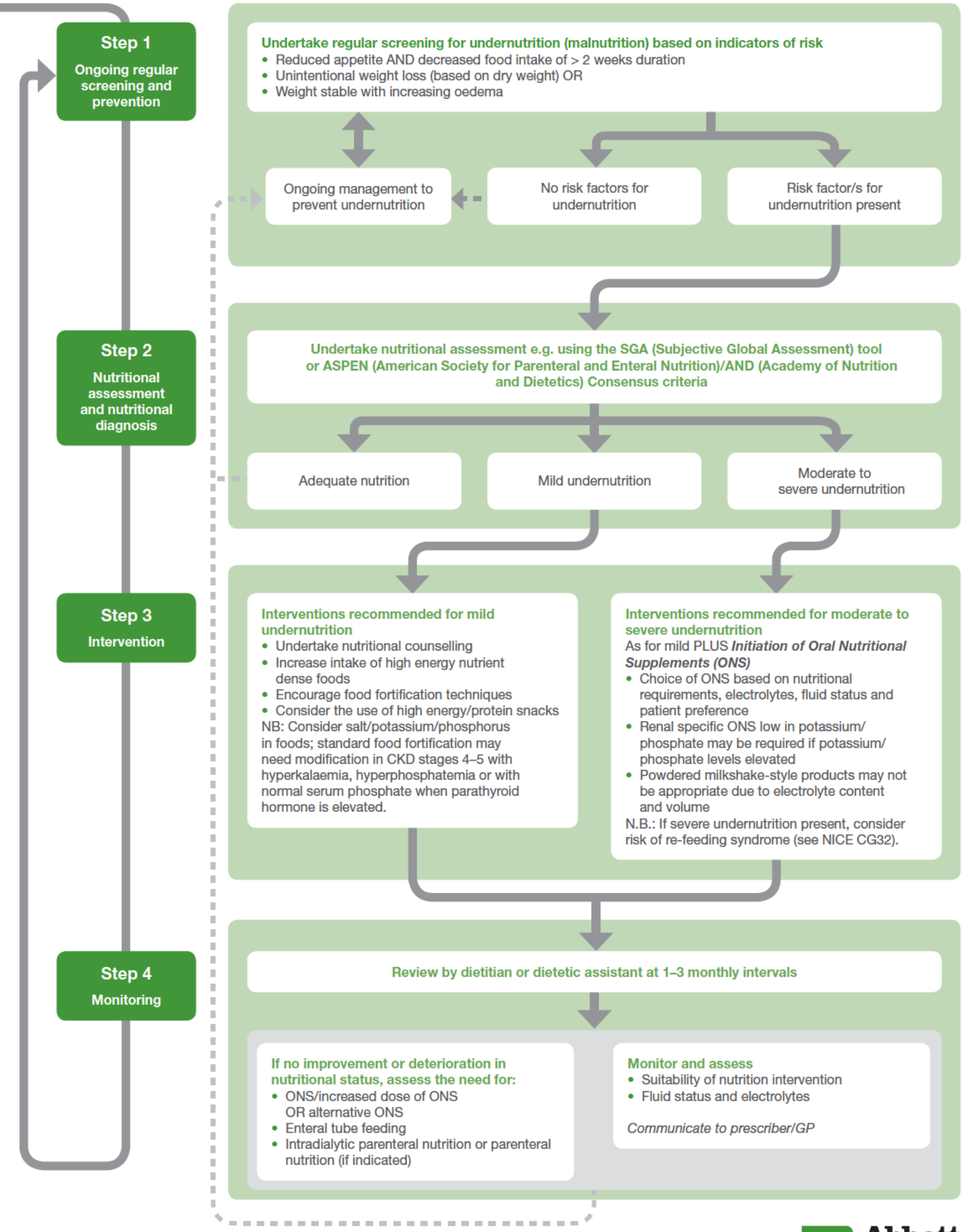
Consensus statement on nutrition support and the use of oral nutritional supplements in patients with stages 4–5 chronic kidney disease



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Step 1

Screening and ongoing management to prevent undernutrition should include:

- Regular screening for undernutrition *(Wright & Jones, 2010)*
  - Weekly for inpatients
  - 2–3 monthly for outpatients with estimated Glomerular Filtration Rate (eGFR) <20 but not on dialysis
  - Within one month of commencement of dialysis then 6–8 weeks later
  - 4–6 monthly for stable dialysis patients
- Optimise body mass index (BMI) (based on dry weight)
- Undertake nutritional counselling at least 6 monthly
- Consider any psychosocial issues that may have an impact on nutritional status e.g. ability to shop and/or prepare food; low mood/depression
- Consider micronutrient status and multivitamin and mineral supplementation
- Liaise with the multi-disciplinary team to manage uraemic symptoms, and optimise blood glucose control, blood pressure and dialysis therapy

Step 2

Assessment by dietitian (or personnel in line with local protocol)

- **Nutritional assessment and nutritional diagnosis:** Using SGA *(Detsky et al., 1987; Steiber et al., 2007)* or ASPEN/AND Consensus criteria *(White et al., 2012)*
- Classify undernutrition as mild, or moderate to severe using SGA *(Detsky et al., 1987; Steiber et al., 2007)* or ASPEN/AND consensus *(White et al., 2012)*
  - ASPEN/AND criteria is two or more of:
    - Insufficient energy intake
    - Weight loss
    - Loss of muscle mass
    - Loss of subcutaneous fat
    - Localised or generalised fluid accumulation that may sometimes mask weight loss
    - Diminished functional status as measured by hand grip strength

If no undernutrition, continue preventative management and regular screening.

Step 3

Nutritional intervention for undernutrition

Treatment goal for pre-dialysis, haemodialysis and peritoneal dialysis is to meet estimated energy and protein requirements

- *For stage 4 and stage 5 CKD pre-dialysis*
  - Protein intake 0.75g/kg Ideal Body Weight (IBW)/day, equivalent to the RNI *(Wright & Jones, 2010)*; do not offer very low protein diets (less than 0.6–0.8g protein/kg/day) *(NICE CG182)*
  - Energy 30–35 kcal/kg IBW/day *(Wright & Jones, 2010)*
- *For stage 5 CKD undergoing haemodialysis (Naylor et al., 2013)*
  - Protein ≥ 1.1g/kg IBW/day
  - Energy 30–40 kcal/kg IBW/day
- *For stage 5 CKD undergoing peritoneal dialysis (Naylor et al., 2013)*
  - Protein ≥1–1.2g/kg IBW/day
  - Energy 30–35 kcal/kg IBW/day

Consider metabolic state, markers of inflammation, acidosis, wound healing, and other conditions that may further increase protein requirements.

Nutritional Intervention for undernutrition:

- Consider renal specific and energy dense/lower volume feeds when choosing ONS – when electrolyte or fluid modification required (based on kidney function, biochemistry, current dietary intake, and physical examination for fluid status)

Step 4

Monitoring: Review by dietitian or dietetic assistant 1–3 monthly to assess:

- Suitability of nutritional intervention as measured by:
  - Improved energy intake
  - Meeting estimated energy and/or protein requirements
  - Weight maintenance and/or weight gain (based on dry weight)
  - Improved functional status
  - Improved body composition
- Fluid status
- Serum electrolytes

Communicate relevant changes in nutritional status and/or management to GP or other prescriber including:

- Details of full nutritional assessment
- Recommended range of ONS that would be appropriate
- Why other ONS are not appropriate
- Likely duration of treatment/ONS prescription
- Planned review date

References

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- Naylor HL *et al. J Hum Nutr Diet* 2013;26:315–328.
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All management strategies for undernourished patients should be developed by a multidisciplinary team and considered in accordance with local practice guidelines for screening, referrals and management.

Supported by an educational grant from Abbott Nutrition. The views expressed are those of the expert group and not necessarily those of Abbott Nutrition.

Date of preparation: July 2015. RXANI150055(1)

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