

Supplementary Table 1 Core actionable elements of the CGA-guided stratified nursing protocol

CGA domain (trigger)		Intervention elements	Operator			Frequency / monitoring
Nutritional (NRS-2002 ≥ 3)	risk	Preoperative ONS 400 mL/day (600 kcal, ≥ 24 g protein) $\times \geq 5$ days; NG/NJ EN started ≤ 24 h post-op at 20 mL/h, titrated; protein 1.2–1.5 g/kg/day	Ward	nurse	+	Weight, prealbumin, grip strength weekly; ONS-adherence audit
Functional (Barthel < 80)	impairment	Out-of-bed mobilisation ≤ 24 h post-op (sit→stand→ambulate ≥ 5 m); ≥ 30 min/day supervised; bedside resistance-band exercises 3 $\times$ /day	Ward	nurse	+	Daily Morse fall-risk; mobilisation log
Comorbidity (CCI ≥ 3)	burden	Vital signs and SpO ₂ monitoring; standardised daily infection-screening checklist; pharmacist-led medication reconciliation; STOPP/START review	Ward	nurse	+	Twice daily; daily checklist; reconciliation at admission and discharge
Cognitive (MMSE < 24)	impairment	Environmental adjustment; sleep-hygiene bundle (lights off 22:00–06:00, ear-plugs/eye-mask, clustered care); PAINAD pain assessment; reorientation; benzodiazepine avoidance	Ward	nurse	+	Reorientation every 4 h while awake; nightly sleep-hygiene audit

CCI, Charlson Comorbidity Index; EN, enteral nutrition; NG/NJ, nasogastric/nasojejunal; ONS, oral nutritional supplement;

PAINAD, Pain Assessment in Advanced Dementia.