

Supplement Table 5. Summary of included studies comparing the timing of nutritional therapy initiation in critically ill adult patients (KQ3)

Study	Design	Participants	Comparison	Summary
Moon et al. 2023 [48]	Systematic review (9 studies included)	Critically ill sepsis patients	Early EN (≤ 48 hr) vs. delayed EN	- No difference of mortality - Reduced ICU LOS
Talebi et al. 2023 [49]	Systematic review and meta-analysis (15 RCTs and 4 observational studies)	N=3,894 (hospitalized adults incl. critically ill)	Early EN (≤ 48 hr) vs. delayed EN	- Early EN associated with lower mortality (RR 0.83, 95% CI 0.70–0.99) - Reduced infection (RR 0.75) and MV duration (MD –1.5 days) - No significant increase in GI complications
Yu et al., 2021 [51]	Prospective RCT (single blind)	N=100 (critically ill ICU patients)	VEEN (≤ 6 hr) via NJ tube vs. EEN (24–48 hr) via NG tube	- EN (≤ 6 hr): shorter ICU stay & MV duration, less GI complications
Yoshida et al. 2024 [52]	Retrospective cohort study (propensity score matched)	N=4,164 (PS matching 2082 pairs)	VEEN (EN on postoperative day 1) vs. delayed EN (EN on day 2 or 3)	- VEEN group had lower 14-day/28 day PICS - Shorter ICU and hospital stay (~2.2 days) - No difference in mortality
Vega et al., 2025 [53]	Retrospective cohort (4 years, Level 1 trauma center)	N=141 ventilated polytrauma ICU patients	Early EN (≤ 24 h) vs. delayed EN (> 24 h) or no EN	- Early EN associated with shorter ICU LOS (P=0.016) - Delayed EN correlated with higher injury severity (P=0.008) - Each 1-hr delay increased MOF odds by 1.47% (P=0.07)

EN, enteral nutrition; ICU, intensive care unit; LOS, length of stay; RCT, randomized controlled trial; RR, relative risk; CI, confidence interval; MD, mean difference; GI, gastrointestinal; VEEN, very early enteral nutrition; NJ, nasojejunal; EEN, early enteral nutrition; NG, nasogastric; PS, propensity score; PICS, persistent inflammation immunosuppression and catabolism syndrome; MOF, multiple organ failure.

