

Table 2. *Emerging and established biomarkers in sepsis: diagnostic and prognostic tools in the elderly.*

Biomarker	Main mechanism / biological rationale	Main clinical use	Representative references
Procalcitonin (PCT)	Increases in bacterial infections and systemic inflammation	Diagnosis of bacterial infection and sepsis; guides antibiotic decisions	Wacker et al., 2013; [25] Gómez-Cerquera et al., 2015 [27]
Presepsin	Released during monocyte activation by bacterial components	Early diagnosis and severity assessment; correlates with organ dysfunction	Yaegashi et al., 2015 [28] Lee et al., 2022 [29] Kyriazopoulou et al., 2023 [30]
MDW	Reflects monocyte size variability during inflammation	Early sepsis detection; rapid and low-cost	Crouser et al., 2017 [31] Motawea et al., 2023 [33]
PSP	Stress protein released during infection	Early detection and prognosis of sepsis	Prazak et al., 2021 [34] Pugin et al., 2021 [35]
suPAR	Marker of immune activation and chronic inflammation	Prognostic marker for severity and mortality	Eugen-Olsen, 2011 [36] Zhao et al., 2021 [37]
Bio-ADM	Reflects endothelial dysfunction and vascular leakage	Prognostic marker in septic shock; correlates with mortality and vasopressor need	Caironi et al., 2017 [39] Mebazaa et al., 2018 [40] Kim et al., 2019 [41]