**Supplementary Table 1.** Enrollment criteria of the included studies in the meta-analysis

| Study | Inclusion criteria | Exclusion criteria |
|---|---|---|
| Shen et al.[11] | ED patients who presented with syncope of undetermined cause and who had intermediate risk for an adverse cardiovascular outcome. | Patients with an identified cause of syncope during initial evaluation in the ED; patients with any condition that would require hospital admission, including sustained bradycardia (40 bpm), pauses >3 seconds, type 2 second-degree or complete heart block, sustained supraventricular or ventricular tachycardia, confirmed acute coronary syndrome, stroke, severe hemorrhage, haemoglobin <10 g/dL, major trauma, or motor vehicle accident; patients with nonsyncope syndromes, including light-headedness, dizziness, vertigo, presyncope, coma, shock, spells, fall, metabolic syndrome, typical seizure presentation or recurrence of known seizure or other state of altered mentation, or cardiac arrest. |
| Rodriguez-Entem et al.[12] | Patients who came to the ED suffering from syncope and had not previously been examined for this reason. | Serious accompanying illness; suspected acute ischemia; evident heart failure; non-syncopal episodes |
| Sun et al.[13] | ED patients aged 50 years or older evaluated for a complaint of syncope or near syncope, at intermediate risk | Patients with a serious condition identified during the ED visit, including symptomatic arrhythmias, myocardial infarction, pulmonary embolism, acute pulmonary edema, stroke, severe anemia or blood loss requiring blood transfusion, sepsis, and major traumatic injury; seizure, head trauma, or intoxication as the reason for loss of consciousness; new or baseline cognitive impairment; do-not-resuscitate or do-not-intubate status; active chemotherapy for cancer; and inability to speak either English or Spanish. |
| Grossman et al.[14] | ED patients presenting with syncope, with an age of 18 years or older | Patients discharged directly home from the ED without an observation stay; patients with persistent altered mental status; alcohol or illicit drug-related loss of consciousness, seizure, coma, hypoglycaemia; transient loss of consciousness caused by head trauma; near syncope. |
| Ungar et al.[15] | ED patients referred for T-LOC in which syncope was suspected as the main diagnosis | Patients in whom syncope was a secondary manifestation of a different disease; patients with an immediate diagnosis in the ED of non-syncopal T-LOC (epilepsy, functional, transient ischaemic attack, stroke, basal or vertebral artery syndrome, subclavian steal syndrome, vertiginous syndromes, panic attack, drug intoxication, and hypoglycaemia). |
| Numeroso et al.[16] | ED patients between the ages of 18 to 90 years, presenting with syncope | Patients with a clearly established cause for their syncope after the ED evaluation; patients who met low-risk criteria; patients with other active diseases requiring hospitalization; patients presenting with non-syncopal causes of loss of consciousness (e.g., trauma, intoxication, seizures) |

ED, emergency department; T-LOC, transient loss of consciousness.

**Supplementary Table 2.** Quality assessment of randomized controlled trials

| | Shen et al.[11] | Sun et al.[13] |
|---|---|---|
| Was the study described as randomized? | 1 | 1 |
| Was the study described as double blind? | 0 | 0 |
| Was there a description of withdrawals and dropouts? | 0 | 1 |
| Method of randomization | 1 | 1 |
| Method of blinding | 0 | 0 |
| Total score | 2 | 3 |

**Supplementary Table 3.** Quality assessment of observational studies

| | Rodriguez-Entem et al.[12] | Grossman et al.[14] | Ungar et al.[15] | Numeroso et al.[16] |
|---|---|---|---|---|
| Representativeness of the exposed cohort | 0 | 0 | 0 | 0 |
| Selection of the non-exposed cohort | 0 | 1 | 1 | 1 |
| Ascertainment of exposure | 1 | 1 | 1 | 1 |
| Demonstration that outcome of interest was not present at start of study | 1 | NA | 1 | 1 |
| Comparability of cohorts on the basis of the design or analysis | 0 | 0 | 0 | 0 |
| Assessment of outcome | 1 | NA | 1 | 1 |
| Was follow-up long enough for outcomes to occur | 1 | NA | 1 | 1 |
| Adequacy of follow up of cohorts | 0 | NA | 1 | 1 |
| Total score | 4 | NA | 6 | 6 |

NA, not applicable.