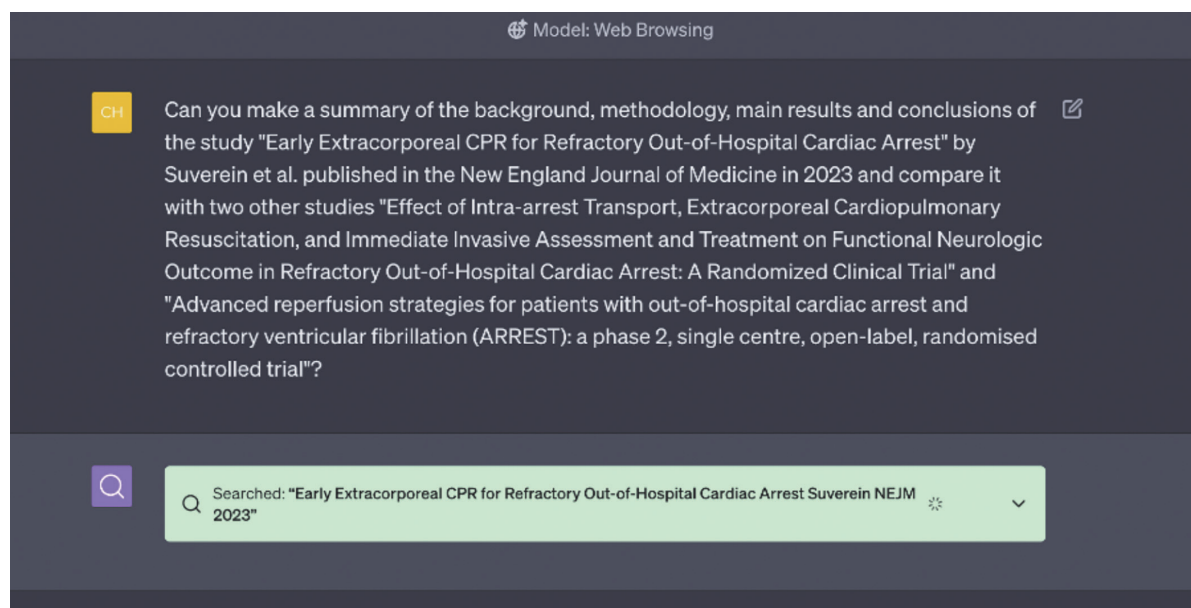


**APPENDIX I. Prompt for the GPT-4 model used in Salvagno et al's study<sup>1</sup> and the current study****Reference**

1. Salvagno M, Taccone FS, Gerli AG. Can artificial intelligence help for scientific writing? Crit Care 2023;27:75.

## APPENDIX 2. Response generated by the GPT-4 model in the current study

### “Early extracorporeal CPR for refractory out-of-hospital cardiac arrest” by Sovereign et al

**Background:** The study focused on evaluating the impact of extracorporeal CPR (ECPR) on survival with a favourable neurological outcome in patients with refractory out-of-hospital cardiac arrest. The evidence for the effects of ECPR in this context was inconclusive prior to the study.

**Methods:** In this randomised, controlled trial conducted in the Netherlands, 160 patients with out-of-hospital cardiac arrest were assigned to receive either ECPR or conventional CPR. Eligible patients were between 18 and 70 years of age, had received bystander CPR, had an initial ventricular arrhythmia, and did not have a return of spontaneous circulation within 15 minutes after CPR had been initiated. The primary outcome was survival with a favourable neurologic outcome at 30 days, defined as a Cerebral Performance Category (CPC) score of 1 or 2.

**Results:** At 30 days, 20% of patients in the ECPR group were alive with a favourable neurologic outcome, compared with 16% in the conventional CPR group. The number of serious adverse events per patient was similar in the two groups.

**Conclusions:** The study concluded that ECPR and conventional CPR had similar effects on survival with a favourable neurological outcome in patients with refractory out-of-hospital cardiac arrest (9†source).

### “Effect of intra-arrest transport, extracorporeal cardiopulmonary resuscitation, and immediate invasive assessment and treatment on functional neurologic outcome in refractory out-of-hospital cardiac arrest: a randomised clinical trial”

**Key findings:** In this study, a bundle of early intra-arrest transport, ECPR, and invasive assessment and treatment did not significantly improve survival with a neurologically favourable outcome at 180 days compared with standard resuscitation. Survival with a neurologically favourable outcome at 180 days occurred in 31.5% in the invasive strategy group and 22.0% in the standard resuscitation group, a difference that was not statistically significant (17†source).

### “Advanced reperfusion strategies for patients with out-of-hospital cardiac arrest and refractory ventricular fibrillation (ARREST): a phase 2, single centre, open-label, randomised controlled trial”

**Background and methodology:** This study compared early ECMO-facilitated resuscitation with standard ACLS treatment in patients with out-of-hospital cardiac arrest (OHCA) and refractory ventricular fibrillation. The trial included adults aged 18-75 years presenting to the University of Minnesota Medical Center, and the primary outcome was survival to hospital discharge.

**Findings:** The study found that survival to hospital discharge was observed in 7% of patients in the standard ACLS treatment group versus 43% in the early ECMO-facilitated resuscitation group. The study was terminated at the first preplanned interim analysis by the National Heart, Lung, and Blood Institute after enrolling 30 patients because the posterior probability of ECMO superiority exceeded the prespecified monitoring boundary. Cumulative 6-month survival was significantly better in the early ECMO group than in the standard ACLS group.

**Interpretation:** The study concluded that early ECMO-facilitated resuscitation for patients with OHCA and refractory ventricular fibrillation significantly improved survival to hospital discharge compared with standard ACLS treatment (23†source).

**Comparison of the Studies:** The first and second studies did not show a significant difference between extracorporeal CPR and standard resuscitation methods in terms of survival with a favourable neurologic outcome. The first study showed a slightly higher survival rate with a favourable neurologic outcome in the ECPR group compared to the conventional CPR group (20% vs 16%), but the difference was not statistically significant. The second study showed a slightly higher survival rate with a neurologically favourable outcome in the invasive strategy group (which included ECPR) compared to the standard resuscitation group (31.5% vs 22.0%), but again the difference was not statistically significant. Both studies suggested that ECPR does not improve outcomes compared to conventional resuscitation methods in patients with refractory out-of-hospital cardiac arrest (9†source) [17†source].

In contrast, the third study showed a significant improvement in survival to hospital discharge with early ECMO-facilitated resuscitation compared to standard ACLS treatment in patients with OHCA and refractory ventricular fibrillation (43% vs 7%). This study also demonstrated significantly better cumulative 6-month survival in the early ECMO group than in the standard ACLS group. Thus, the third study provided evidence that early ECMO-facilitated resuscitation can significantly improve survival in this patient population (23†source).

Therefore, while the first two studies suggested that ECPR does not significantly improve outcomes compared to standard resuscitation methods, the third study suggested that early ECMO-facilitated resuscitation can significantly improve survival in patients with OHCA and refractory ventricular fibrillation. The discrepancies in the results may be due to differences in study design, patient populations, and treatment protocols, among other factors. Future studies will be necessary to further investigate these issues and determine the most effective treatment strategies for patients with refractory out-of-hospital cardiac arrest.