



BACKGROUND AND OBJECTIVES

Edema Disease (ED) is an enterotoxaemia caused by certain *Escherichia coli* colonizing the small intestine and produces verotoxin (VT2e). ED is mainly observed in recently weaned piglets, although it can also be observed during the growing and finishing phases.

In this study, the safety and efficacy of VEPURED® vaccine were evaluated.

MATERIALS AND METHODS

Seventy-four healthy piglets of 2 days of age were included:

- VEPURED® group: 1 ml VEPURED® IM (n=32)
- CONTROL group: 1 ml of PBS IM (n=32)
- Sentinel group: left untreated (n=10)

The onset (OOI) and the duration of immunity (DOI) were evaluated by the intravenous administration of VT2e at 21 days and 16 weeks after vaccination, respectively.

RESULTS

No clinical signs resulting from the VEPURED® administration were observed.

All the vaccinated piglets were fully protected against mortality after challenge (Figure 1).

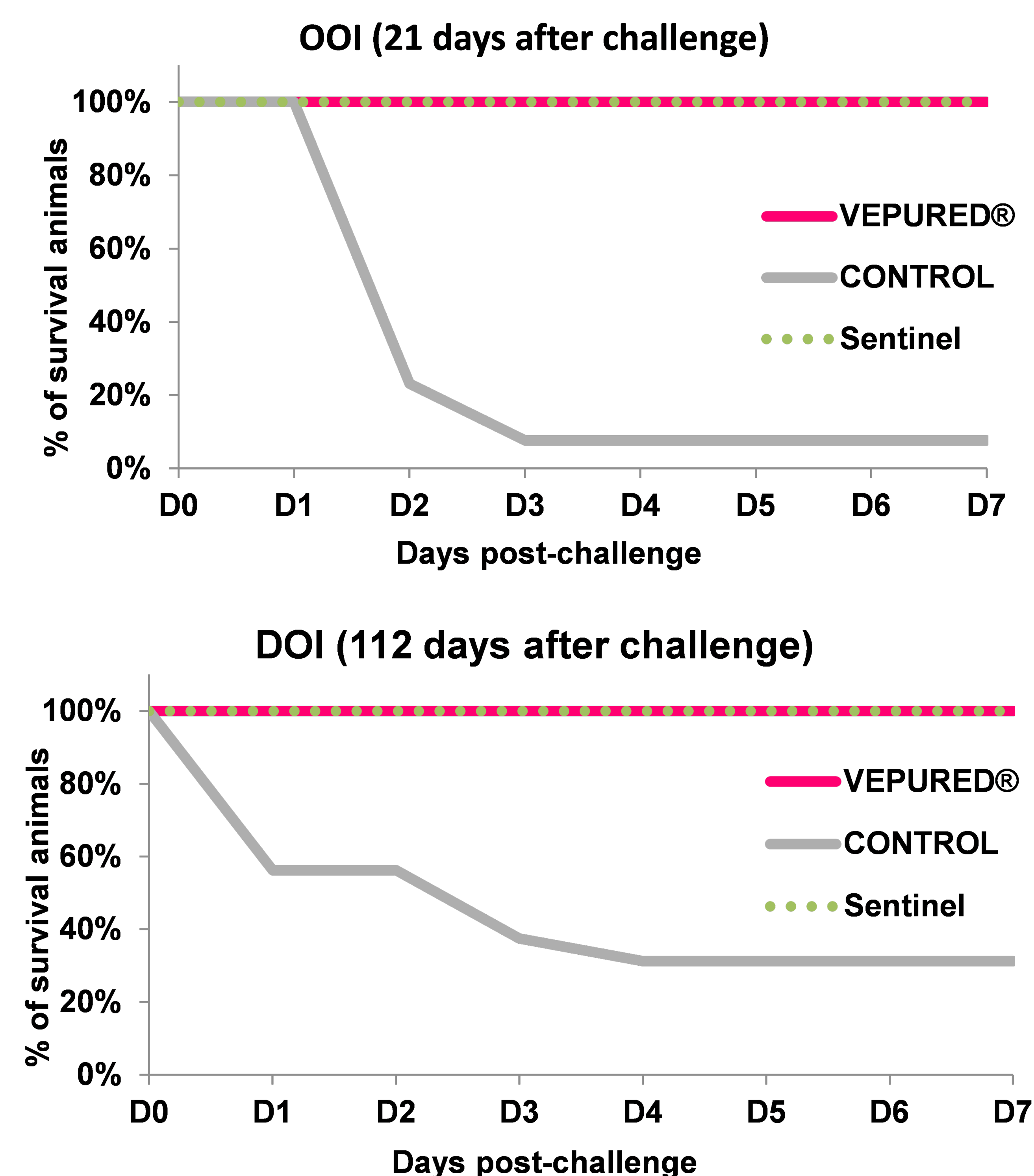
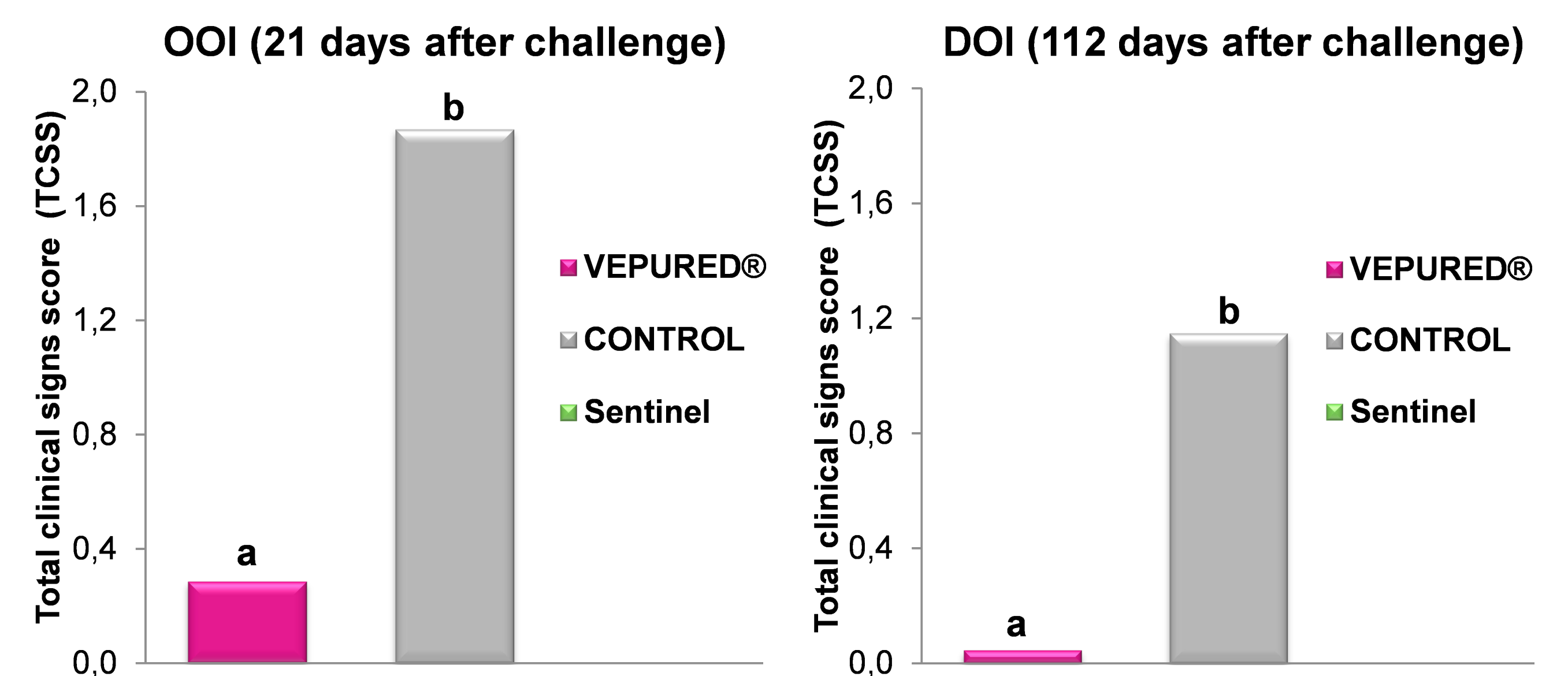


Figure 1. Survival curve after VT2e challenge.

VEPURED® vaccination resulted in a statistically significant reduction in both, the incidence and the severity of clinical signs associated with ED (Figure 2).



Significant differences are represented by different superscript letters (Mann-Whitney; $p < 0.05$).

Figure 2. Total clinical signs score after challenge.

Protective neutralizing antibodies against VT2e were developed in all the vaccinated piglets and persisted for more than 16 weeks after vaccination (Figure 3).

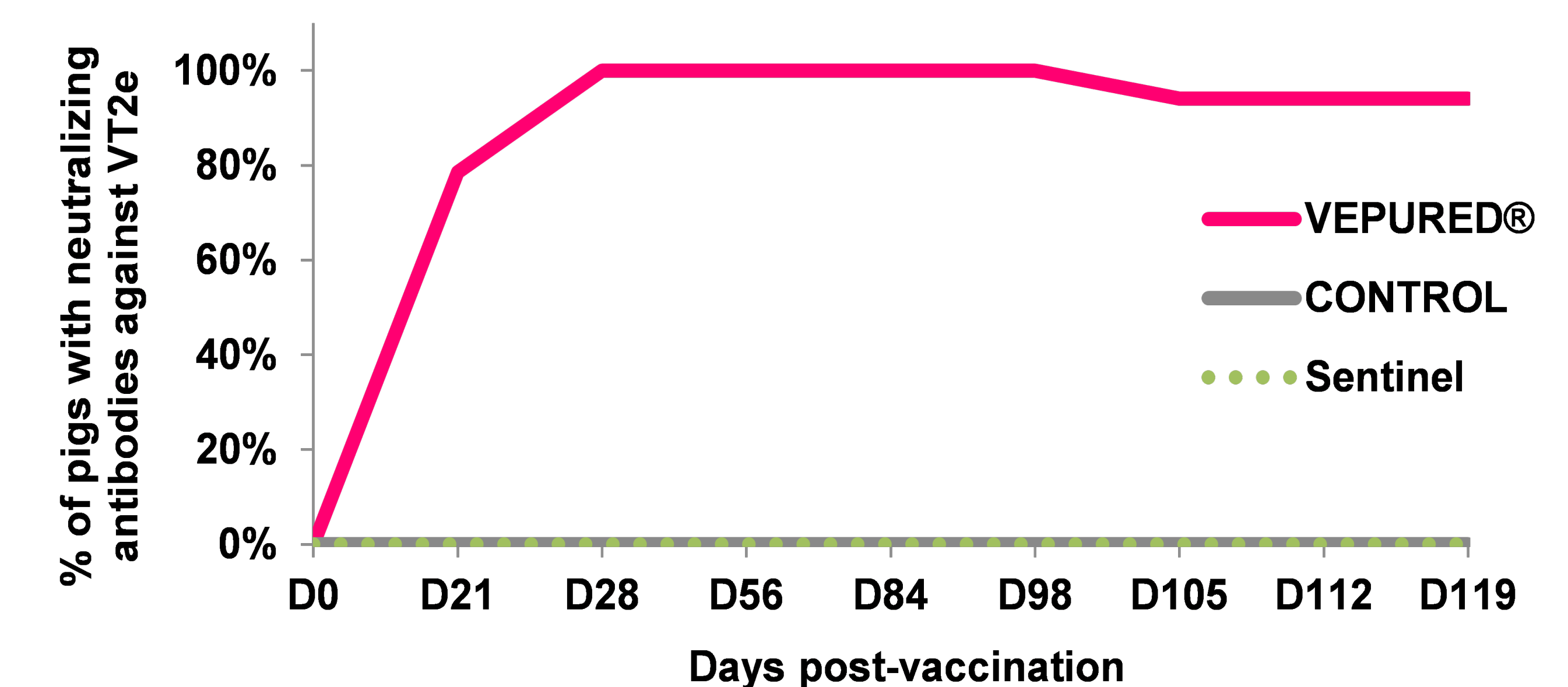


Figure 3. Percentage of animals with seroneutralizing antibodies against VT2e after vaccination.

DISCUSSION AND CONCLUSIONS

Active immunization of piglets of 2 days of age with VEPURED® vaccine confers safe and effective protection against ED 21 days after vaccination.

VEPURED® vaccine is able to reduce the presence and the severity of clinical signs and prevents mortality.

VEPURED® gives long-lasting protection for at least 16 weeks after vaccination and thus, VEPURED® confers protection during the fattening phase.