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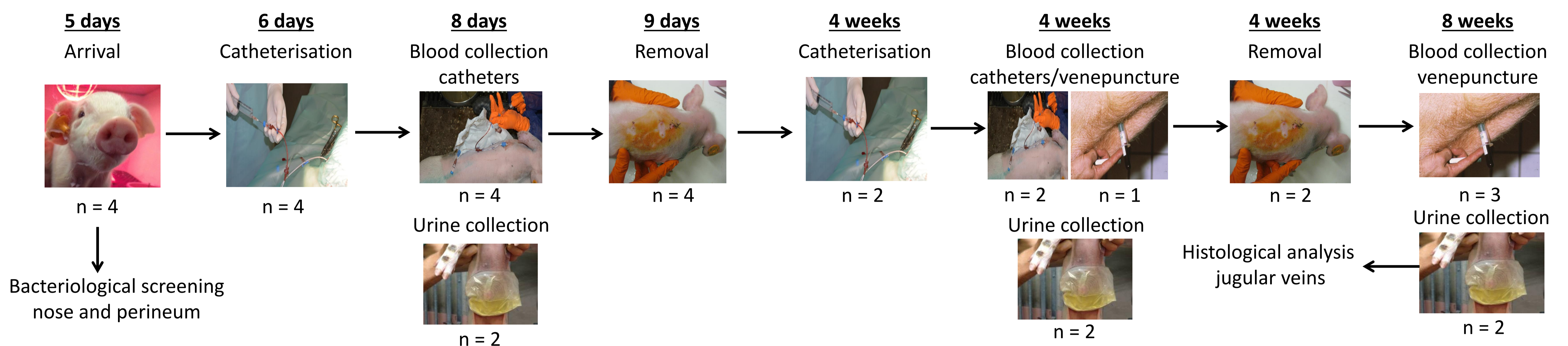
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## BACKGROUND

The piglet is considered as a valuable alternative animal model to perform preclinical pharmacokinetic (PK), pharmacodynamic (PD) and toxicity studies in the pediatric subpopulation. To be able to perform such studies, multiple blood and urine collections are required. The aim of the present study was to develop repetitive blood and urine sampling techniques in the same piglets (n = 4, 2♂/2♀) aging eight days, four and eight weeks. Blood was collected either by a surgically-placed jugular vein catheter (eight days old (n = 4), four weeks old (n = 2)) or by direct venepuncture of the jugular vein (four weeks old (n = 2), eight weeks old (n = 4)). Urine was collected in the male piglets using non-invasive urine collection pouches (eight days, four weeks and eight weeks (n = 2)).

## METHODS



## RESULTS

### Bacteriological screening



**MRSA Positive**  
1 piglet †

### Surgery/anesthesia



**No complications**  
All piglets survived

### Blood collection



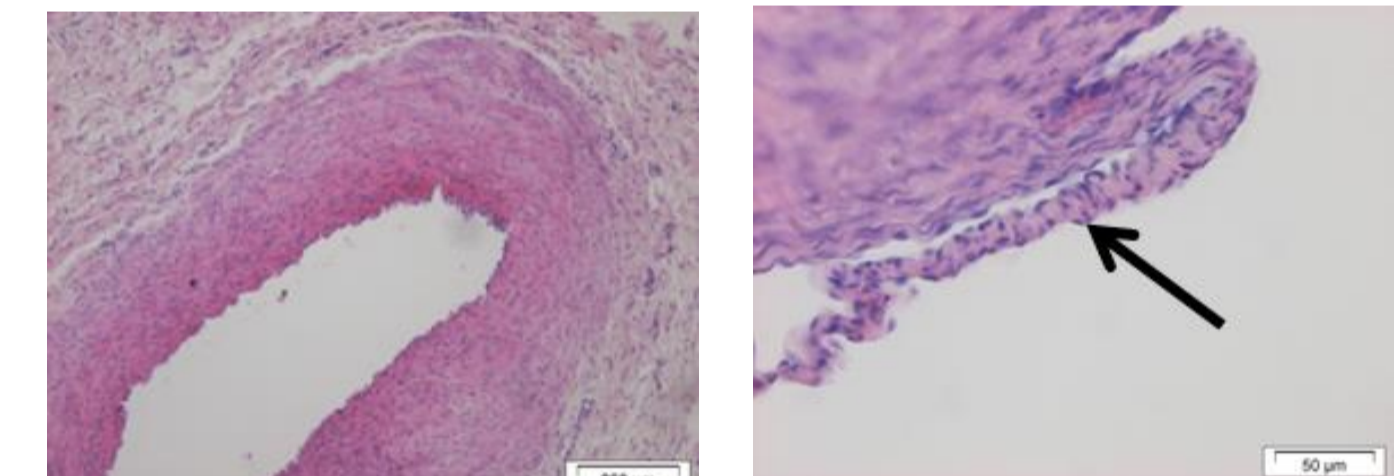
12 time points, 1 mL  
**Catheters functional for 48h**  
**Collections easily performed**

### Urine collection



3 collections, 1 h  
**Non invasive technique**  
**No leakages and complications**

### Histological analysis



**Negligible damage**      **Remodelling**

## CONCLUSION

The presented urine (urine pouches, male piglets) and blood sampling (catheterization and venepuncture, male and female piglets) techniques make it possible to easily perform PK/PD studies growing piglets. catheterization is preferred, since this is a more ethical method of collecting multiple blood samples in piglets.

## ACKNOWLEDGMENTS

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