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## Background

Intrauterine growth restriction (IUGR) is a major health problem in human medicine and animal production.

## FACTS

- 5-10\% human neonates
- 15-20\% piglets
- Low birth weigh
- Reduced growth


## RISKS

- Mortality rate $\uparrow$
- Short term morbidity $\uparrow$
- Long term morbidity $\uparrow$


## Hypothesis

Aberrant vasculogenesis is believed to be a possible contributing factor to the development of IUGR. Furthermore, it has been reported that fetal vascularization adapts differently in IUGR males and females. Our hypothesis is that the blood vessels in the umbilical cord (UC) of male and female IUGR piglets differ morphologically from each other.

## Aim

To assess the cross-sectional area (CSA) of umbilical cord (UC) blood vessels in male and female IUGR piglets.

## Materials and Methods

## Selection of piglets



Sample collection Umbilical cords are


## Sampling process



IUGR piglets have a relatively higher cross-sectional area (CSA) of the umbilical arteries and veins compared to control piglets.
2. There is no morphological difference between the umbilical arteries and veins of males and females.


## Conclusions

[^0]2. Based on our results there is no difference in CSA of UC blood vessels between males and females. Nevertheless, functional vascular differences (such as VEGF expression) between both sexes need to be investigated.

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[^0]:    1. The relatively higher CSA in IUGR piglets might be explained by the higher need for blood flow to the developing organs compared to control piglets.
