**For discussion: potential outline of non-spatial analyses**

Main things to compare among treatments, excluding spatial behaviour after release:

* Times to events (handling, recovery, total time, etc)
* Adverse outcomes – injuries, death within 30 days
* Body temperature and hyperthermia
* …

The range of questions we can answer is limited by the lack of standardised measurements, e.g. no mass for manually restrained pigs.

Also, capture method and drugs are confounded

* 91 manual captures with no drugs
* 155 pole syringe captures with zoletil
* 119 dart captures with zoletil and xylazine (59 atipamezole, 31 yohimbine, 29 without reversal?)

**Q1 Do time to event profiles (survival curves) differ among treatments?**

Expectation 1.1: Pigs subjected to manual restraint had shorter handling and total time (e.g. Kaplan-Meier hazard, median time) than pigs captured with pole syringe or dart.

* handling duration ~ capture method (manual, pole + z , dart + zx)
* total duration ~ capture method

Expectation 1.2: Pigs subjected to different chemical treatments had different handling and total time.

Again, there’s some confounding here that will have to be woven into the discussion.

Maybe:

* recovery duration ~ drug combination (zoletil, zx, zx + yohimbine, zx + atipamezole?)
* total duration ~ drug combination (zoletil, zx, zx + yohimbine, zx + atipamezole?)

**Q2 Did the probability of adverse events differ among capture methods?**

We don’t seem to have consistent data for scoring or describing injuries, but we could look at differences in probability of death (from causes other than misadventure) within 30 days.

* Pr(death <31 days after capture) ~ treatment (± body temp or hyperthermia, total time, recovery duration for immobilised pigs)

**Q3 Did Body temperature and hyperthermia risk differ among treatments?**

I suspect this might depend on when the temperature was taken. For manually restrained pigs, it was taken while the pig was being collared, shortly before release. I presume it was taken during collaring for immobilised pigs, in which case it mightn’t be an accurate representation of temperature during prolonged recovery when animals might suffer from poor thermoregulation?

Expectation 3.1: Average body temperature during handling differed among treatments.

I don’t have a strong prior expectation that any treatment will be ‘better’ than any other with respect to body temperature during handling.

* Body temp ~ treatment + ambient temp
* Pr(body temp > 40C) ~ treatment + ambient temp