**Discovery analysis**

**Traits**
- T2D, Obesity
- Waist circumference
- Fasting glucose
- Fasting insulin
- 2-h glucose

**Samples**
- CoLaus sequenced \((n = 2086)\)
- CoLaus imputed \((n = 3539)\)
- GEMs sequenced \((n = 1579)\)
- Individuals with BMI sequenced \((n = 11,806)\)

**Targeted genotyping follow-up analysis**

**Traits**
- Fasting glucose, 2 hour glucose, T2D, BMI

**Samples**
- Ely (g) \((n = 1722)\)
- LOLIPOP (g) \((n = 6565)\)
- EPIC-Norfolk (g) \((n = 25,313)\)
- ADDITION-Ely (g) \((n = 932 T2D cases - 1487 controls)\)
- Fenland (g) \((n = 6379)\)
- GenOA (i) \((n=129 cases, 1501 controls)\)

**In silico follow-up analysis**

**Traits**
- Fasting glucose, 2 hour glucose, T2D, BMI

**Samples**
- MAGIC (FG: \(n = 20,077\); T2D cases = 9524, \(n\) controls = 60,718; BMI \(n = 68,978\))

**Combined Analysis:** Meta-analysis of **discovery, follow-up** and **in silico follow-up analyses**