

Ultrasound assessment of gastric contents in patients with epidural analgesia in advanced labor or requiring cesarean delivery

Saranya Lertkovit, Louisa J. Palmer, William R. Camann, Noor Raheel, Michaela K. Farber, Bushra W. Taha

Background

- Fasting guidelines in labor: consensus-based, designed to minimize aspiration risk
- Effects of epidural analgesia on gastric emptying are variable
- Refinement of risk assessment is warranted
- Gastric ultrasound (GUS) can assess gastric contents at point of care

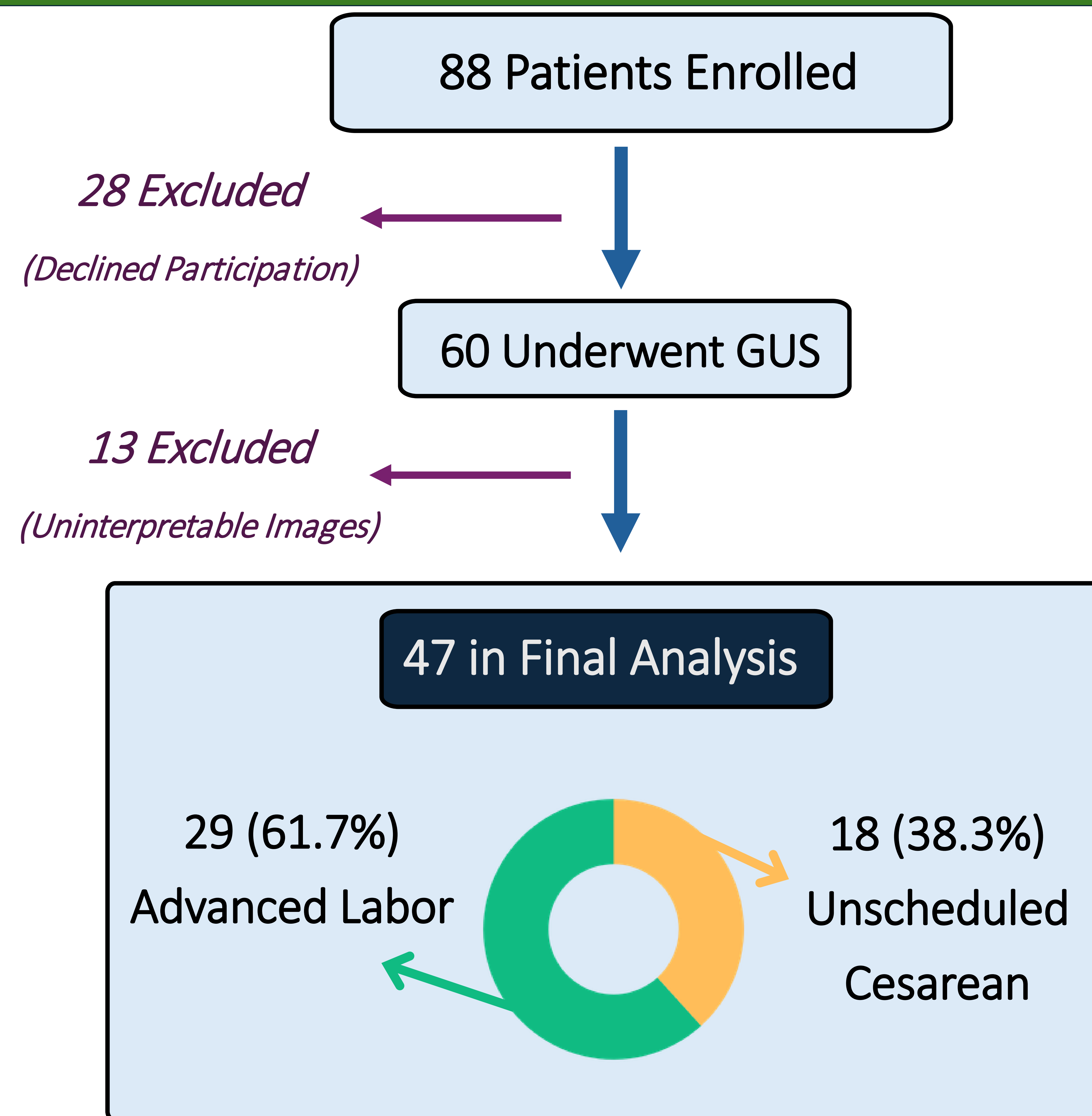
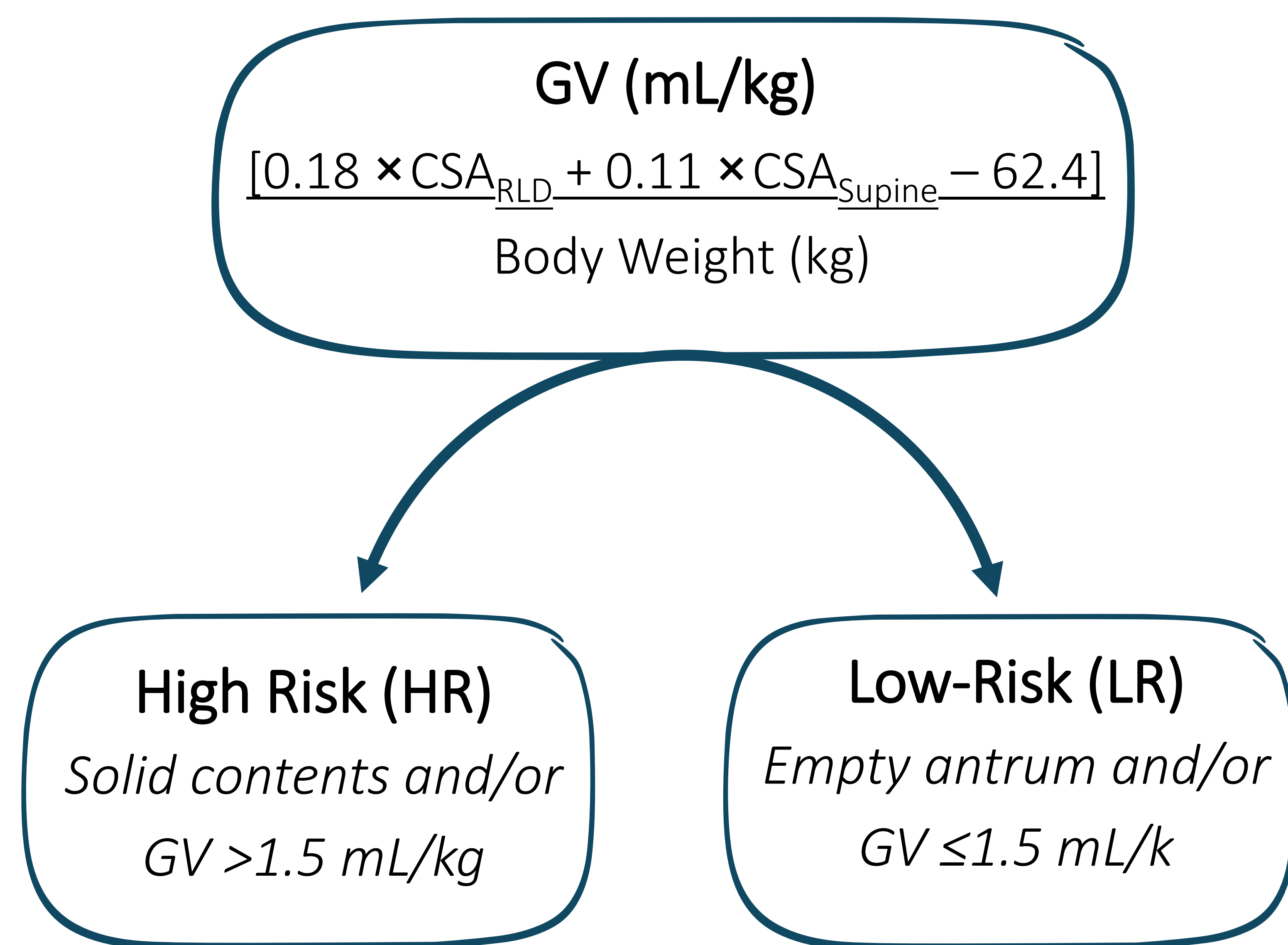


Hypothesis

GUS can reliably assess gastric volume and contents in patients with epidural analgesia who are either in advanced labor or undergoing unscheduled, non-urgent cesarean delivery.

STUDY DESIGN & METHODS

- Prospective observational study (Oct 2024-May 2025)
- Single quaternary hospital
- Patients with established epidural analgesia with
Cervical dilation ≥ 9 cm OR
Unscheduled/non-emergent cesarean delivery
- GUS in semi-right lateral decubitus and supine positions



RESULTS

Baseline Demographics

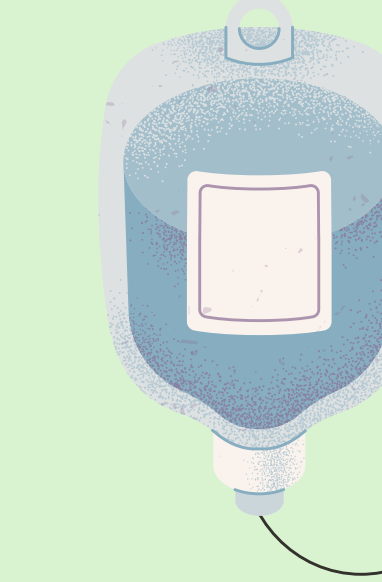
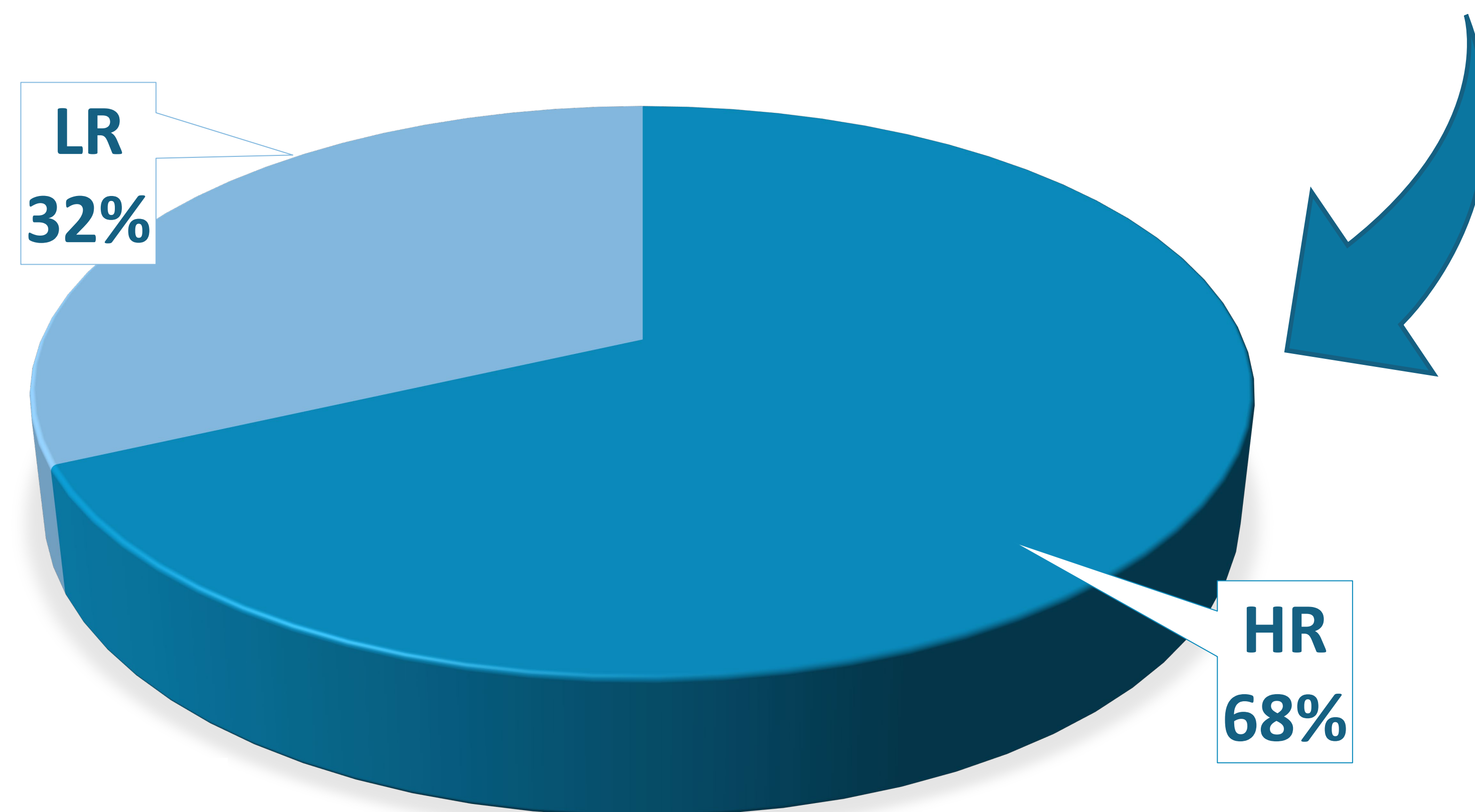
32 Years
Mean Age

Healthy
(70% without comorbidities)

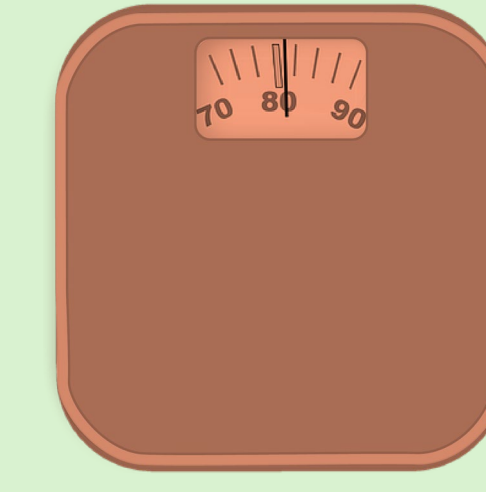
Majority
Gravida 1, Para 0

31.4 kg/m²
Mean BMI

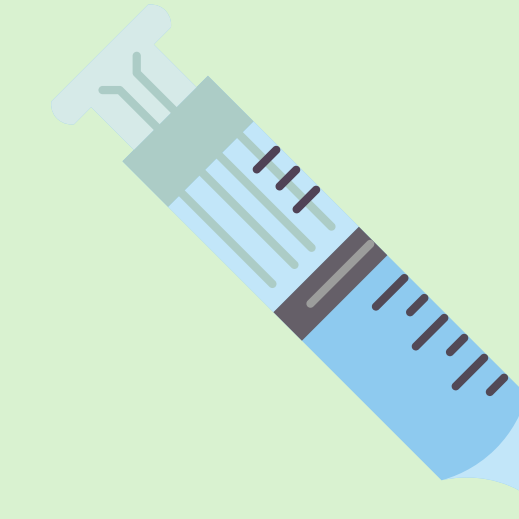
Over 2/3 of patients were “high-risk” by gastric contents



Epidural
Duration



Body Mass
Index

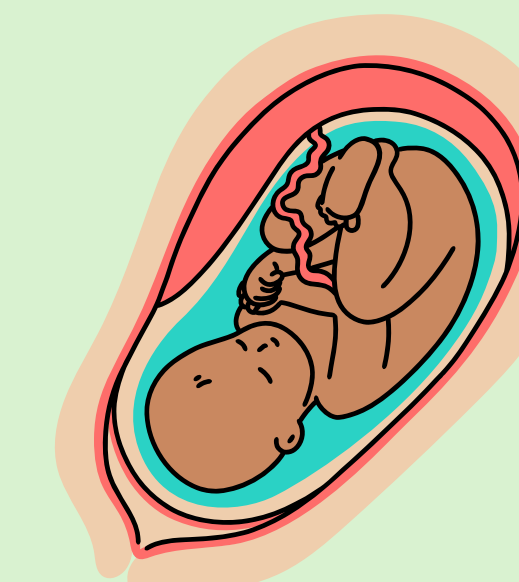


Epidural
Fentanyl Dose

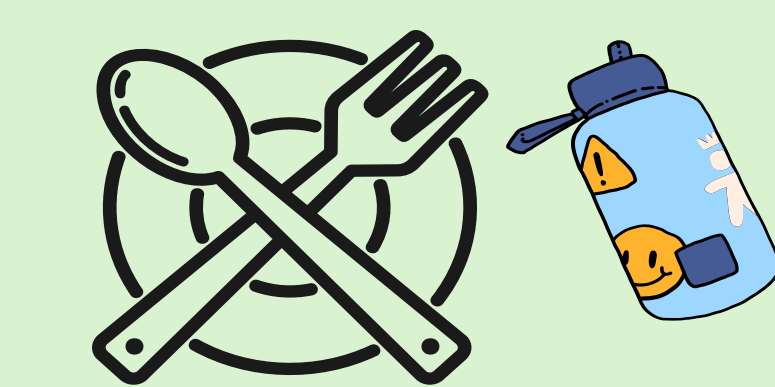
No Significant
Correlation



Fatty Food
Intake



Delivery Mode



Fasting Duration
(Solids/Liquids)

CONCLUSIONS

- **The Hidden Reality:** A substantial proportion of patients in advanced labor or undergoing unscheduled cesarean delivery have elevated gastric contents.
- **The Diagnostic Solution:** Despite limitation of images quality at term, GUS is a practical tool to aid individualized aspiration risk assessment.
- **The Paradigm Shift:** The relationship between elevated gastric contents and true aspiration risk warrant a fundamental re-assessment of current labor fasting guidelines.