BiliCam
Using Mobile Phones to Monitor Newborn Jaundice

Bilirubin
- High bilirubin levels yellow the skin
- Common: visible in 84% of newborns
- Extreme levels lethal, but treatable
- Every newborn tested

Technology

Constraints via UI
Image Processing
Bilirubin Estimation

Evaluation
- Clinical Study
- 100 newborns
- Ground Truth: TSB (blood draw)
- Control: TcB

Results
- **BiliCam**
  - 0.85 rank order correlation
  - 2.0 mg/dl mean error
- **TcB**
  - 0.92 rank order correlation
  - 1.5 mg/dl mean error

Bilirubin Level Reference Chart

- High risk
- High intermediate risk
- Low intermediate risk
- Low risk

Current testing methods
- TSB
- TcB

Bilirubin Estimation

0.85 rank order correlation
2.0 mg/dl mean error

0.92 rank order correlation
1.5 mg/dl mean error