The Auto mA feature on the latest wave of GE scanners

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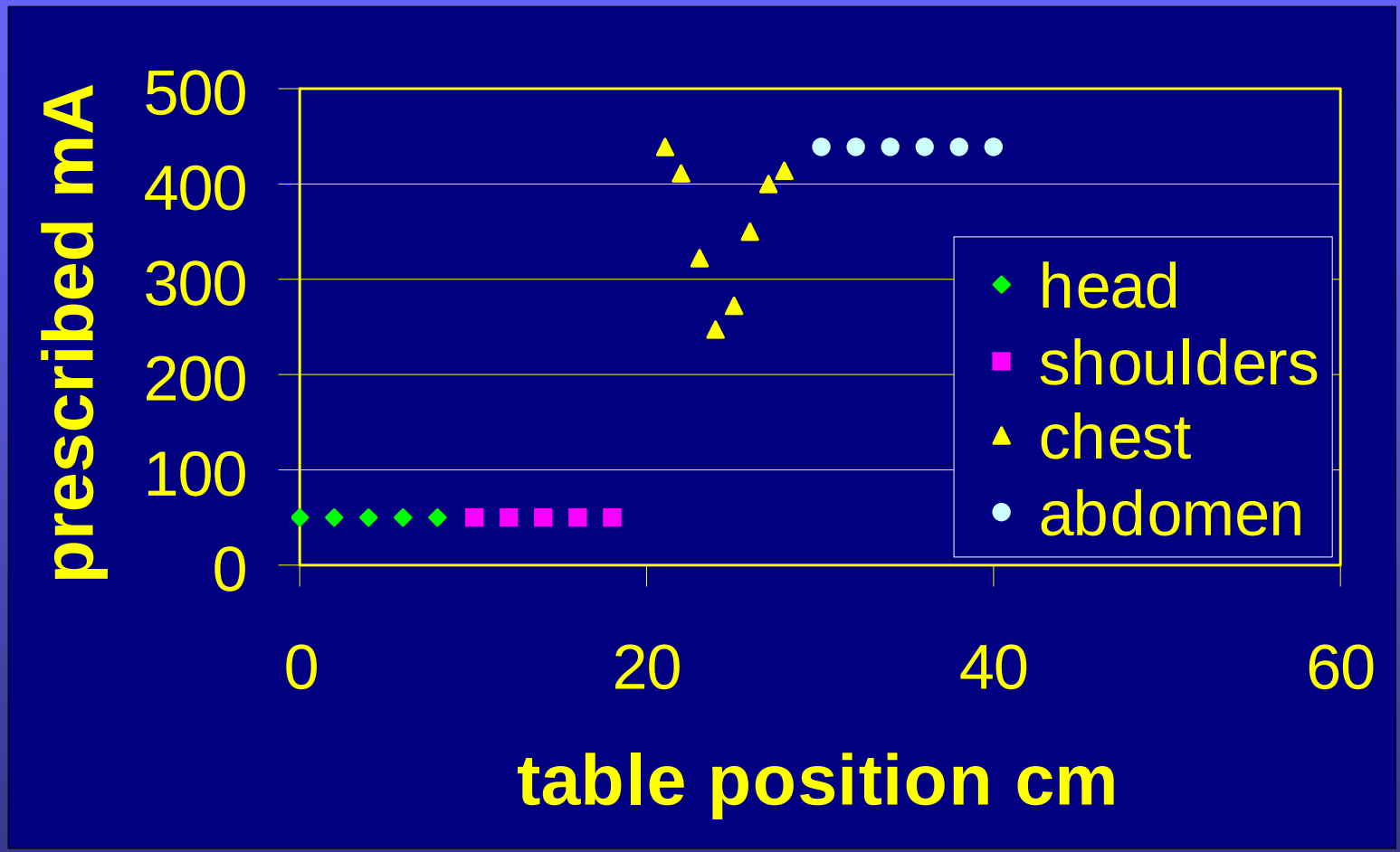
Auto mA the GE way

- Perform 1 or 2 scout views
  - measure x-ray transmission through patient
- Select noise index
  - freely selectable
  - normal (1.0), low dose (0.9), IQ (1.1)
- Select lower and upper mA thresholds
- mA prescription determined from transmission data

Testing Auto mA

Results



Normal NI (11.57), 50-440 mA

Findings

- Software fails at transitions
  - clinically irrelevant
- mA prescription from 1 scout only
  - last scout (unconfirmed)
  - potential problem scanning shoulders and pelvis
- Prescribed mA $\propto 1/NI^2$
- Image noise $\propto 1/mA^{½}$
- NI is a function of slice thickness
  - anecdotal finding

Questions

- Improved experimental technique
- Relationship between NI and slice thickness
- Adequate noise index for imaging task
- Sufficient mA latitude
- Accuracy of DLP