A short introduction to Bland–Altman plots

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Measurements?

What we're measuring

We're measuring continuous variables:

- Blood pressure
- Tumour volume
- Renal function
- Pulmonary function
- Body height

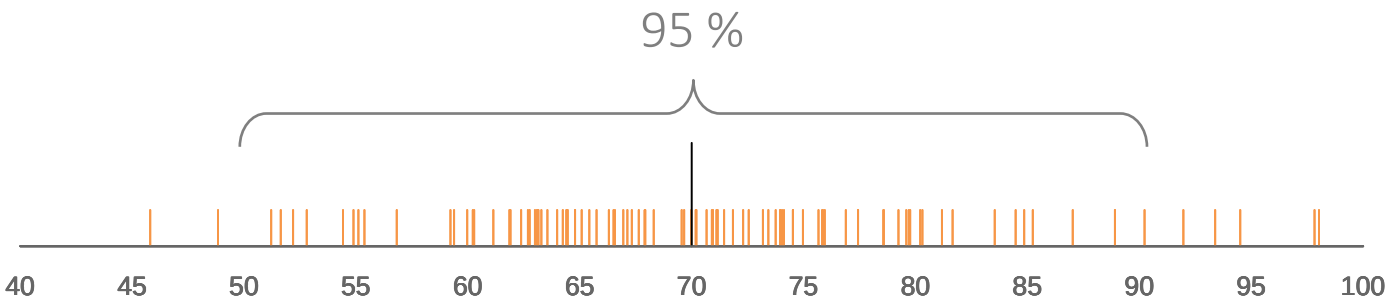
Variation

Variation

Summary statistics

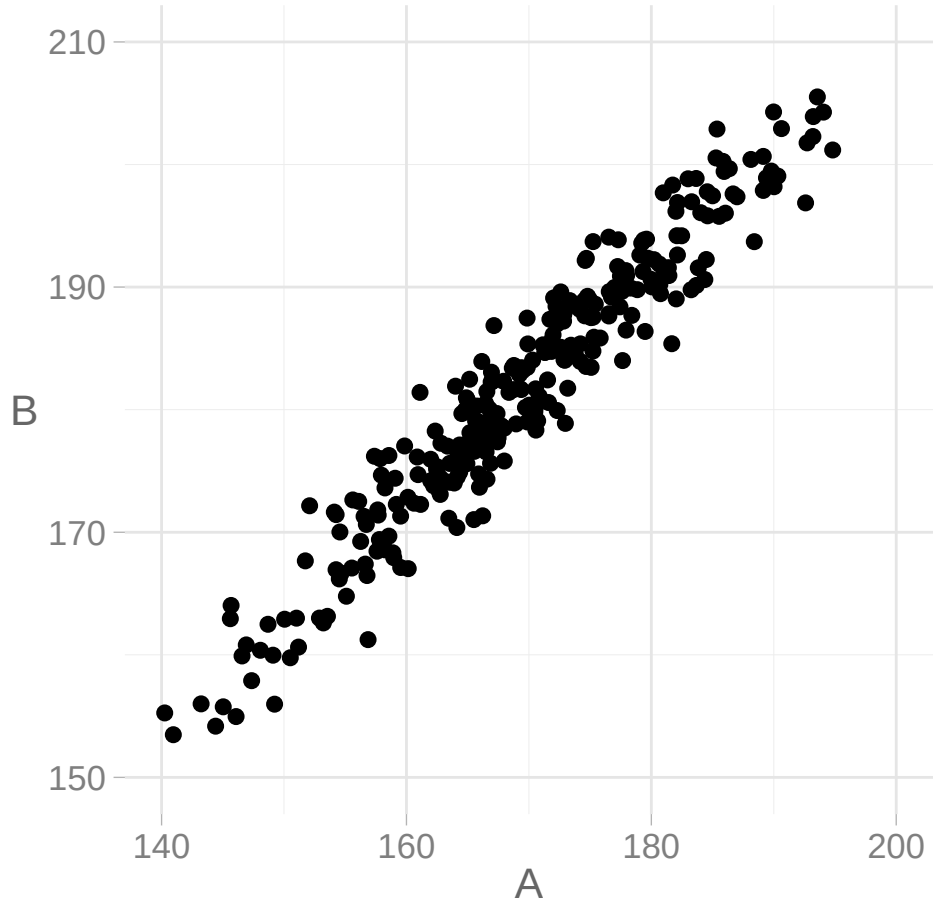
Average: 70

Standard deviation: 10



Correlation

Correlation does **not** measure agreement



Correlation: 0,96

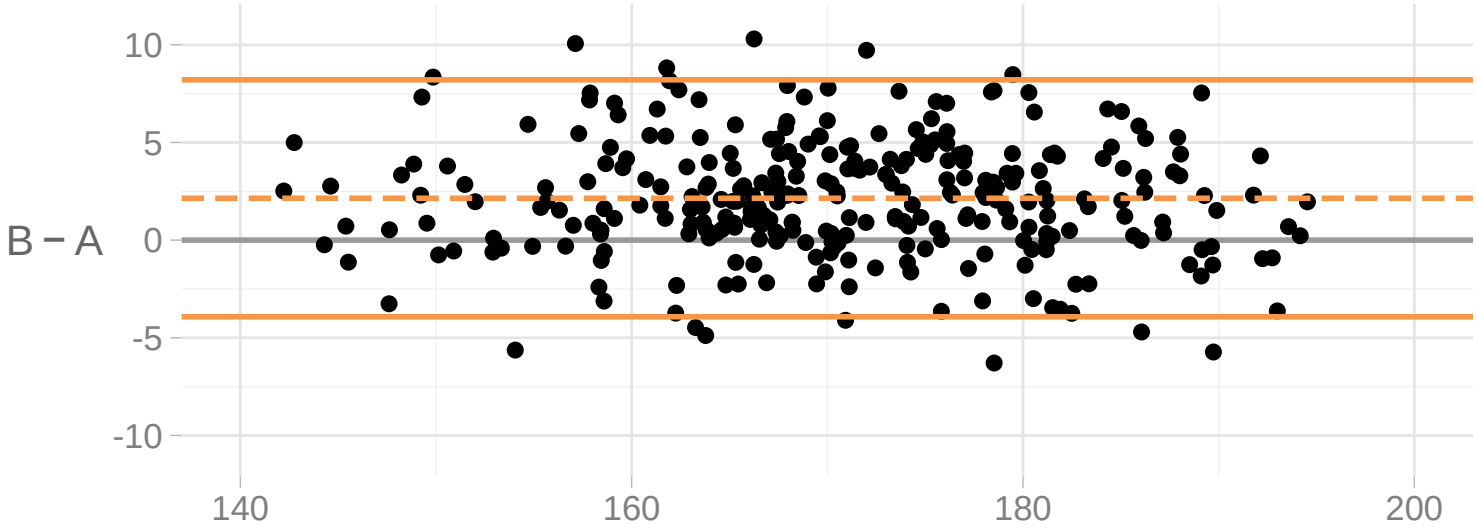
Method B is miscalibrated – it's 10 cm off

The Bland–Altman method

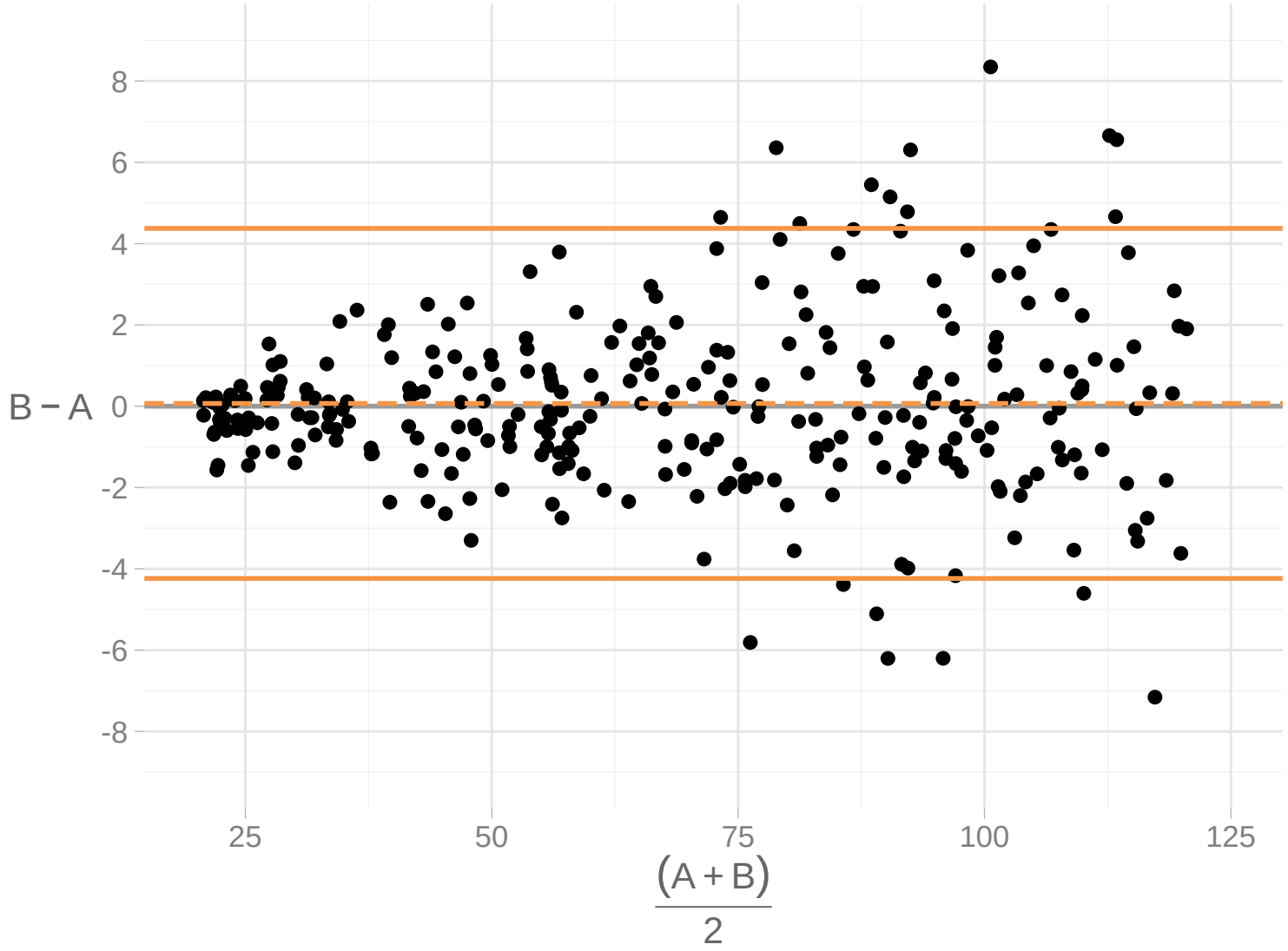
Let’s look at differences

Some statistics on the difference (B – A)

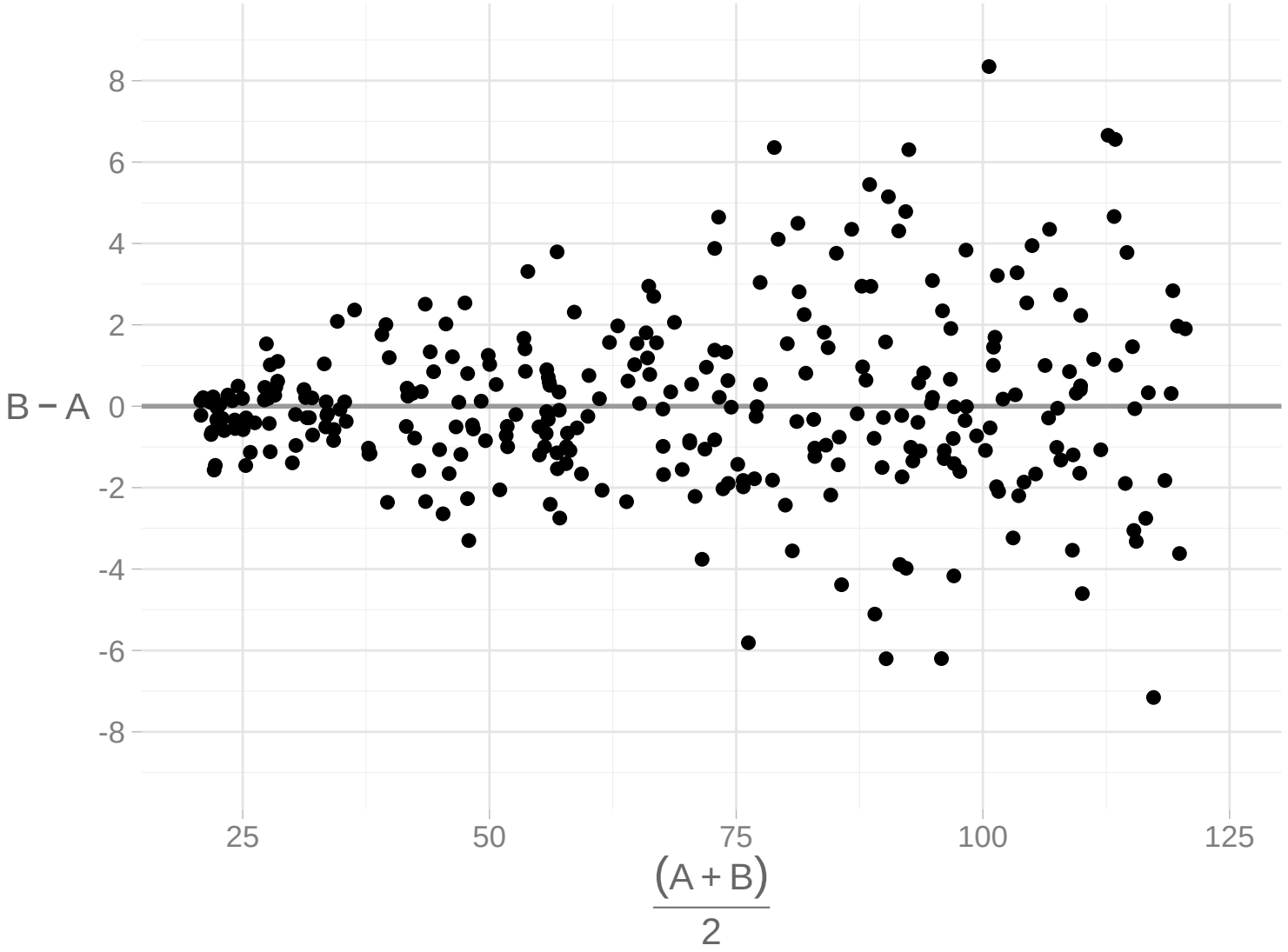
- Average: 2,1 cm
- Standard deviation: 3,0 cm
- Limits of agreement: (2,1 ± 2 · 3,0) cm = (–3,9; 8,1) cm



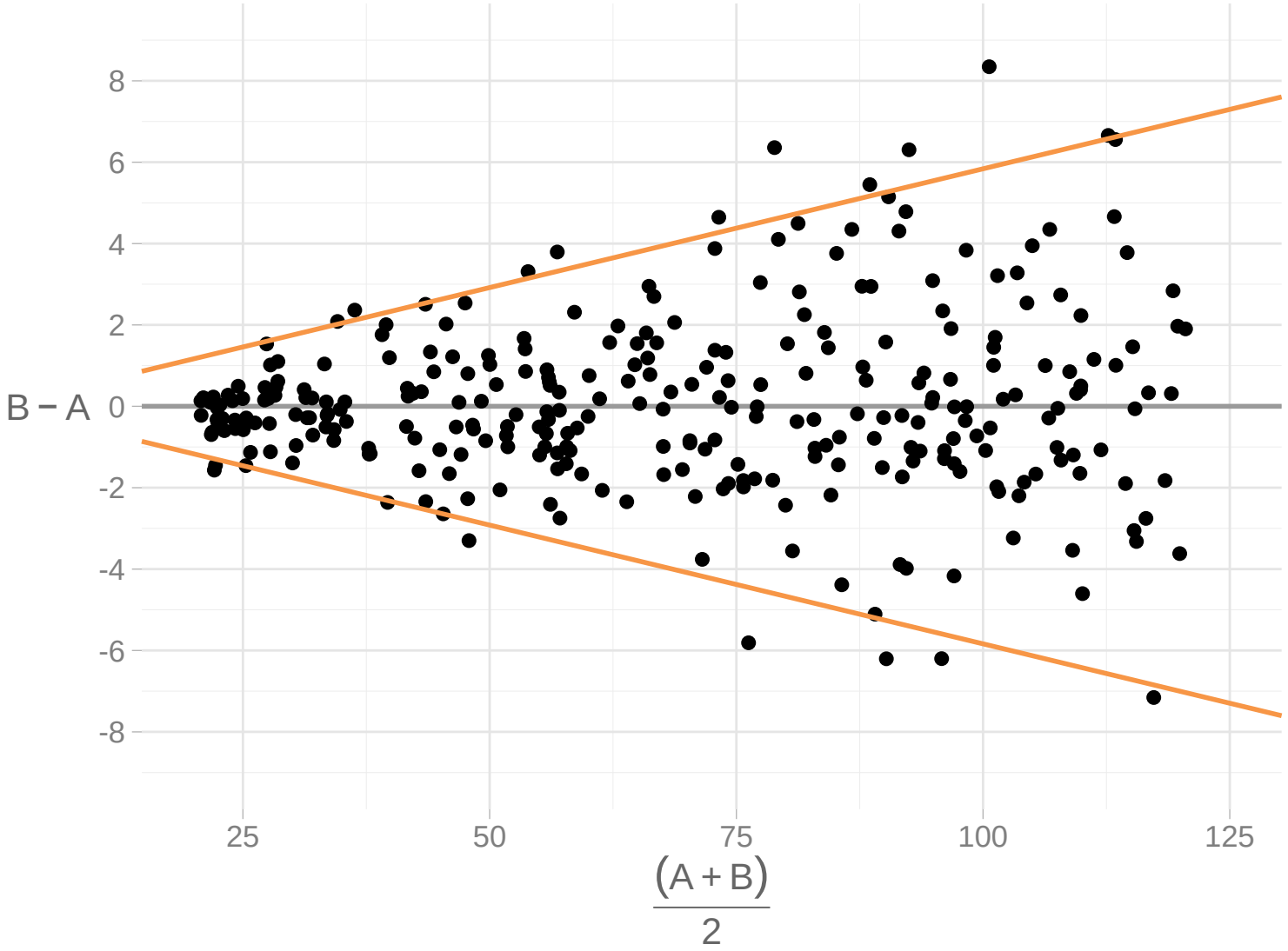
Increasing differences



Bland–Altman plot on logged data



Back-transforming



The End