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* **Method comparisons -**

→ Various approaches

(1) freq. plot (Histograms of difference & measure of central tendency and dispersion & Distribution of diff. bet)

(2) A difference (bias) plot, & shows difference as a function of average concentration of ~~analyte~~ measurements (Bland-altman)

(3) Regression analysis.

(1) Difference [Bland-Altman] plot:

Use: - for evaluating method comparision data.

↓

plot of difference against average of results of methods to be compared.

↓

- provide info. on relation b/w diff. and concentration → evaluate whether problem is in certain range

↓

caused by non linearity of one of method.

- Also to observe whether dif. tends to ↑ proportionally & ↑ in concentration or whether independent of conc.

- This relation of dif and concentration useful in context of how to adjust irregularity → By changing method to correct non linearity

→ By restricting analytical measurement range.

example

Method comparison done for comparing ALT measurement by reagent of kit compa and inhouse IC reagent.

procedure

around 150-200 samples ~~at~~ including QC were analysed with both methods

↓

Data collected and exported in spreadsh

↓

~~Differe~~ Average of results by both meth and difference b/w results by both method calculated

↓

graph plotted

Difference b/w result against average concentration

↓

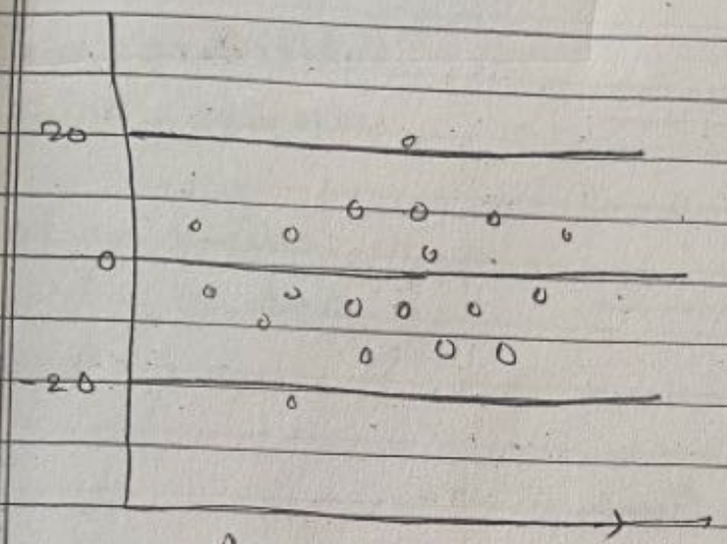
B.A plot for difference

(x1-x2 vs Avg)

Relative difference against average concent

↓

B.A. plot for

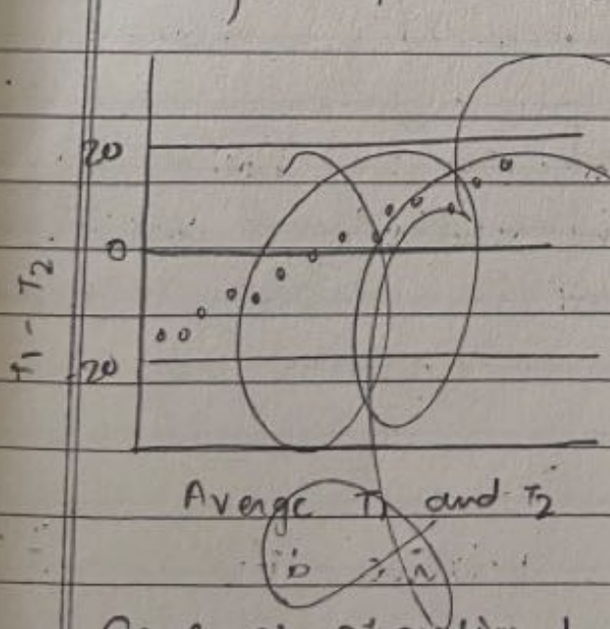


- Scattered diagram of difference plotted against average of 2 measure
- evenly

If the difference is in 2SD is not clinically important, 2 method can be used interchangeably.

⇒ Example of some situation and its interpretation

①.



Difference is proportionately ↑ as mean of analyte ↓ proportional error in one of method.

Case of proportional error.

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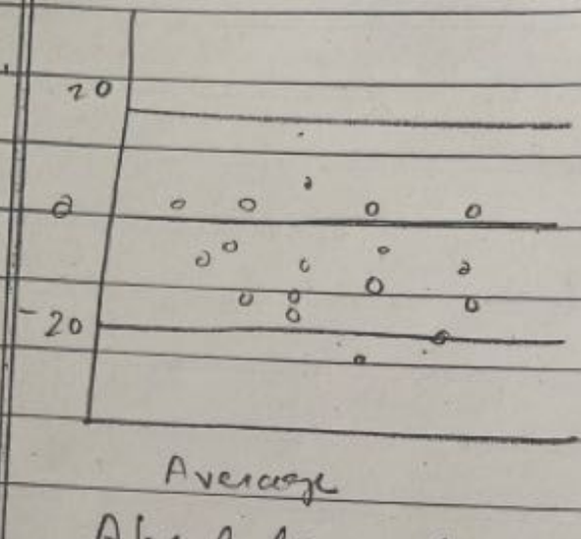
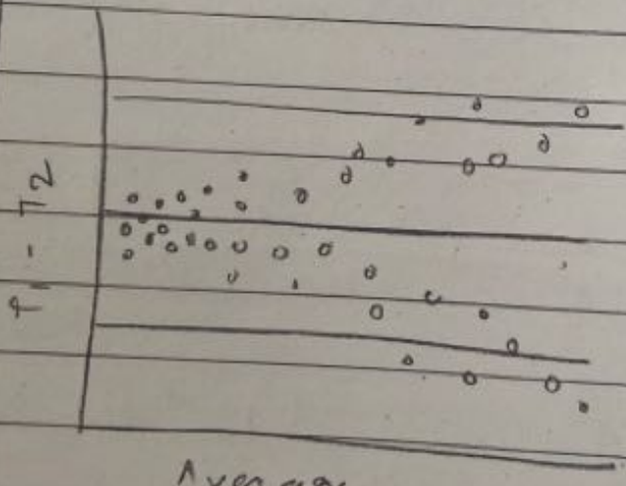
(2).



Absolute systemic error.

Difference is either
Negative or Positi
↓
systemic error
one of the met

(3).



↑ing scattering
↑ing concentration
↓
↑ in random err
↑ing concentrat

Non linear method
↳ one of the method is non linear over certain range.