

CALCULATION OF CCR WITHOUT A URINE SPECIMEN
(LANCET 11:710, 1971)

$$\text{DELTA C} = P - E$$

$$\text{DELTA C (MG/DAY)} = .4W(C2-C1) / \text{DAYS BETWEEN C1 AND C2}$$

$$P1 = E = 29.305 - 0.203A \quad (\text{ADJUSTING FOR AGE})$$

$$CP = 1344 - 43.76C \quad (\text{ADJUSTING FOR UREMIA ITSELF})$$

$$R = P2/P3 \text{ WHEN}$$

$$P2 = 1344.3 - 43.76 \times C_{\text{AVG}}, \text{ AND}$$

$$P3 = 1344.3 - 43.76 \times 1.1$$

$$P4 = P1 \times R$$

$$P = P4 \times \text{BODY WT IN KG}, (\text{ADJUSTING FOR WEIGHT})$$

TAKE 90% OF P FOR WOMEN, WITH SMALLER MUSCLE MASS, (ADJUSTING FOR SEX)

$$C_{\text{PLASMA}} \times \text{VOL PLASMA CLEARED / DAY} = C_{\text{URINE}} \times \text{VOL URINE EXCRETED / DAY}$$
$$C_{\text{PLASMA}} \times \text{CCR PER MIN} \times 1440 = 24 \text{ HR URINE EXCRETION}$$

AND SO IN GENERAL,

$$.4W(C_2 - C_1) / \text{DAYS} = P - C_{\text{AVG}} \times \text{CCR} \times 1440$$

W IS IN HUNDREDS OF GRAMS,
CCR IS IN HUNDREDS OF ML PER MIN

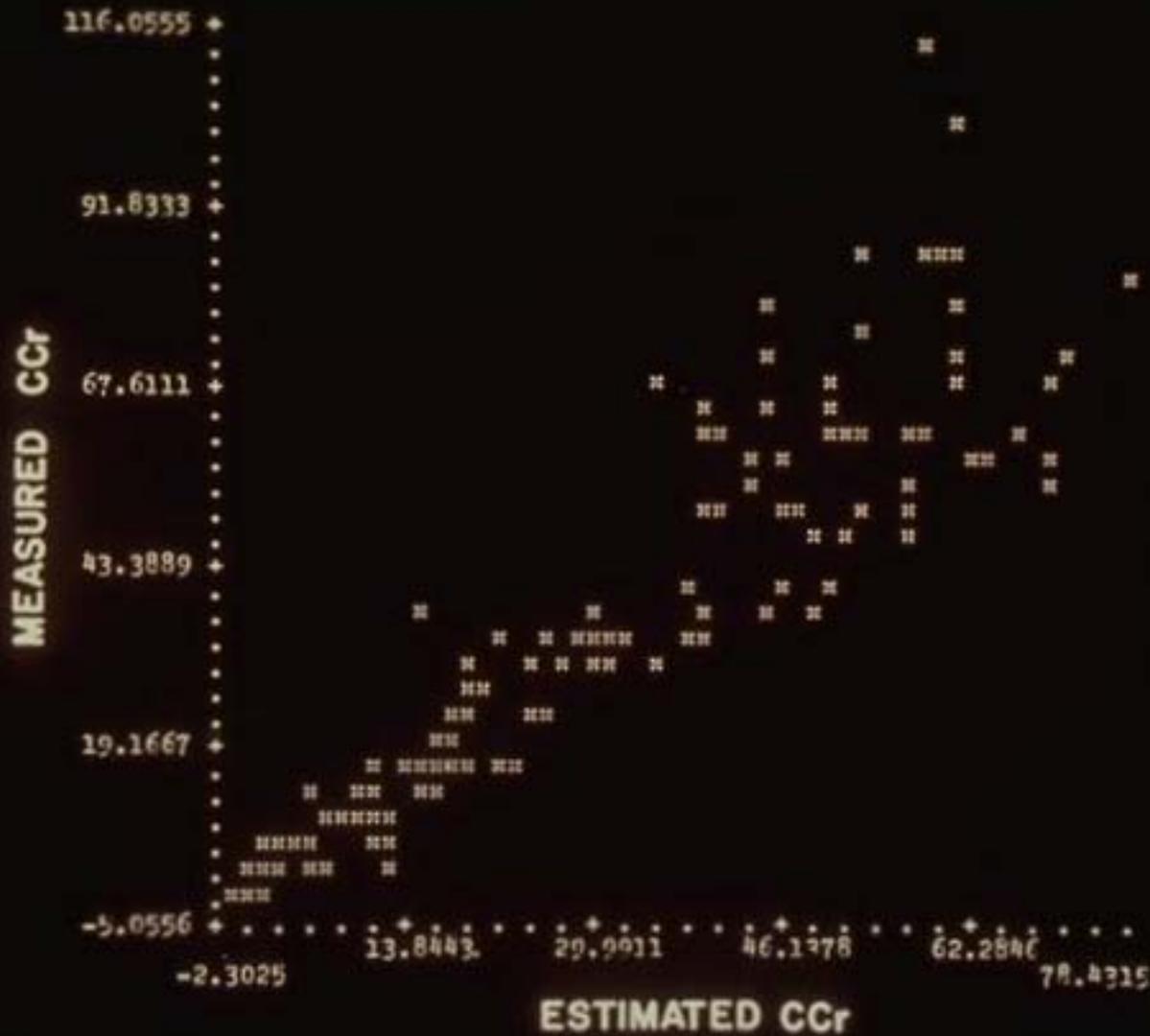
ERRORS IN CLASSICAL MEASUREMENT OF CCR

CV OF SERUM CREAT = 5%

CV OF URINE CREAT = 8%

IF ONE COLLECTS URINE VOL WITH CV OF 5%, THEN

CCR HAS CV OF 11%, OR 95% CONF LIMITS OF 22%



- Estimated vs Measured CCr