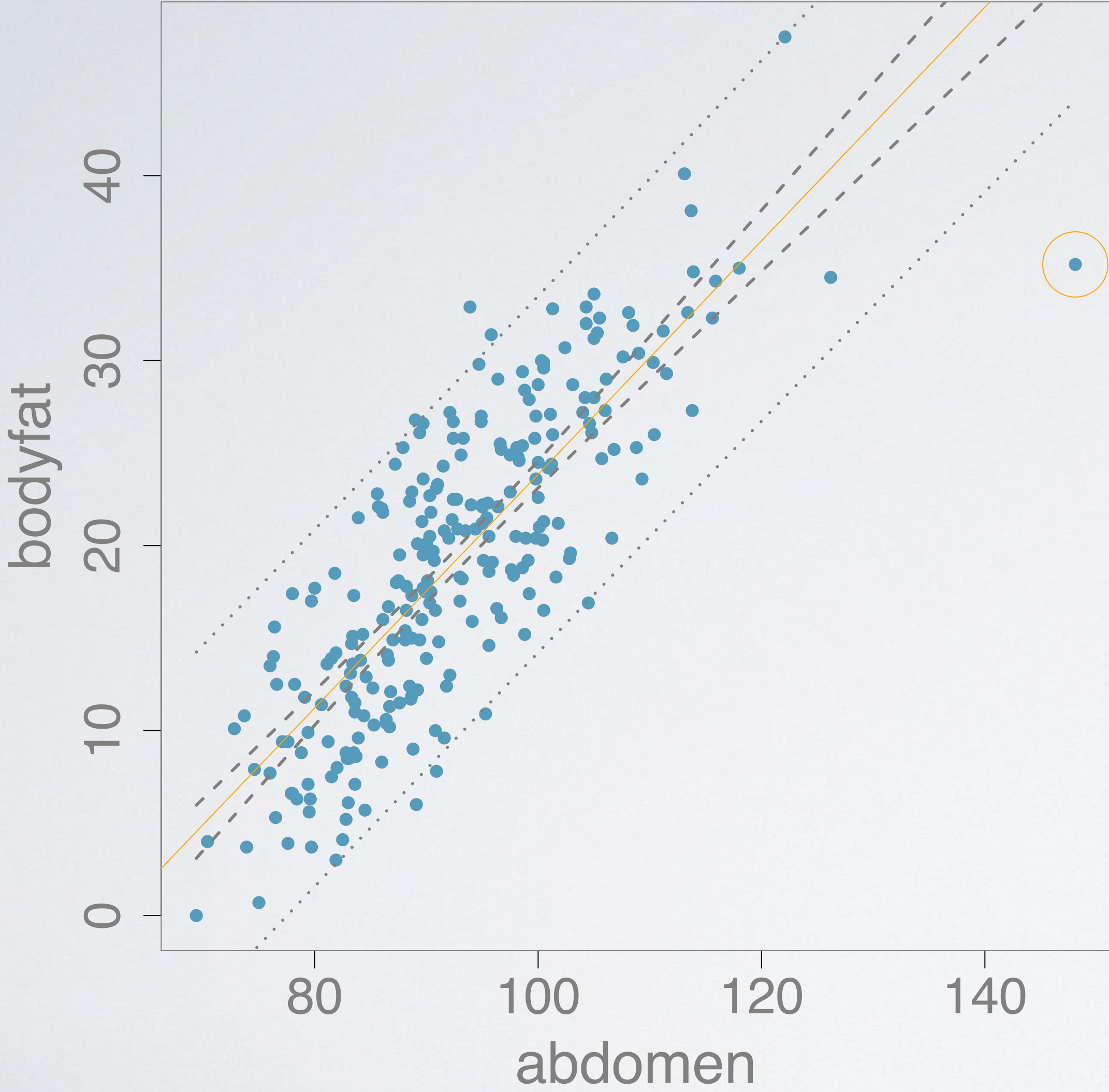


checking for outliers

Dr. Merlise Clyde

prediction intervals



outliers?

$$\varepsilon = y - (\alpha + \beta x)$$

outlier probability: $P(|\varepsilon| > k\sigma \mid \text{data})$

- ▶ $k = 3$
- ▶ $P(\text{case 39 is an outlier} \mid \text{data}) = 0.9917$
- ▶ $k = 3.71$ prior probability any outliers is 0.05
- ▶ $P(\text{case 39 is an outlier} \mid \text{data}) = 0.6848$
- ▶ case 39 has a high probability of being from a different population



summary

- ▶ review from last video
- ▶ check for outliers
- ▶ rethink modeling assumptions