Stratified Analysis and Regression Modelling Questions

1. The following table describes 3 possible outcomes of a stratified analysis or regression-model analysis.

Study findings	Interpretation	What should we report
No heterogeneity, stratified estimates resemble crude	a	d
Heterogeneity	b	e
No heterogeneity, stratified estimates differ from crude	c	f

How would you interpret each of the scenarios depicted in the 3 rows of the table? Provide an interpretation for a, b, and c.

Each of the scenarios depicted in the 3 rows of the table require different reporting of results. What should be reported in these scenarios? Provide an answer for d, e, and f.

2. An advantage of modelling over stratified analysis is that modelling can include continuous variables without the need to create artificial categories. Suppose that age (in years) is included as a continuous variable in a logistic regression model. Exponentiation of the B coefficient for age produces an odds ratio. Use words to state what this odds ratio means.

3. As part of a study, an epidemiologist includes age and sex in the logistic regression model. Inclusion of these variables results in a large change in the estimated odds ratio for exposure in the study. However, neither age nor sex is statistically significant in the model, so the epidemiologist decides to remove these variables from the logistic regression model. Do you agree with the decision to remove them?