

Lab DAGs  
P8122 Statistical Methods for Causal Inference  
Linda Valeri

**Question 1**

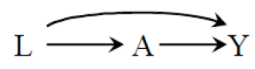
- a) Before coming to P8122, have you ever thought about confounding and how you would have defined confounder? What is a traditional definition of confounder?
- b) What is the definition of confounder based on the backdoor criterion?

**Question 2**

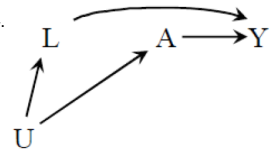
Consider the five directed acyclic graphs (dag) below. For each dag:

- a) Write the non-parametric structural equation model associated with it.
- b) Does conditioning on  $L$  properly adjust for confounding if we used the traditional definition of confounder?
- c) Does conditioning on  $L$  properly adjust for confounding if we used the definition of confounder based on the backdoor criterion?
- d) Provide an explanation when the two criteria lead to a different decision about adjustment for  $L$ .

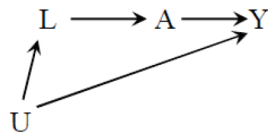
1.



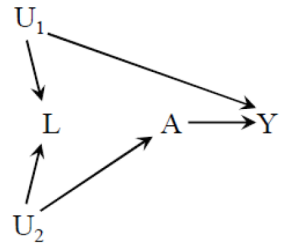
4.



2.



5.



3.

