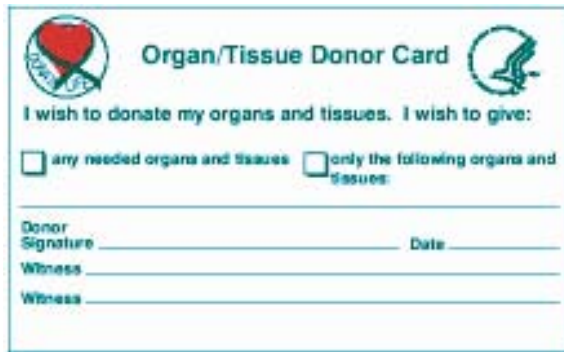


A Bad Reaction: A Case Study in Immunology



The image shows a standard Organ/Tissue Donor Card. It features the American Heart Association logo on the left and the American Lung Association logo on the right. The text reads: "Organ/Tissue Donor Card" and "I wish to donate my organs and tissues. I wish to give:". Below this, there are two checkboxes: " any needed organs and tissues" and " only the following organs and tissues:". At the bottom, there are lines for "Donor Signature", "Date", "Witness", and another "Witness".

Part I

by

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You have been awarded a grant in the amount of \$1200. Your research team is to use this grant to cover the costs of examining the case histories of three patients. Your goal is to make a diagnosis from these records and design a testable experiment that can be used to obtain future funding. You will not be given much time to examine the three patient histories, so be prepared to take notes and record as much information as you can in the time allowed.

Diagnosis

Your team must deliver:

- A diagnosis for Patient #1 and the major pieces of evidence that you used.
- A diagnosis for Patient #2 and the major pieces of evidence that you used.
- An explanation for why Patient #3 appears normal. What are the major pieces of evidence that you used to account for this?

Each patient record contains a reference number. When recording a piece of evidence to back up your diagnosis of a patient, you must reference the record number that you used to obtain that piece of evidence.

Experiment Proposal

Your team must also produce:

- A testable hypothesis to back up your diagnosis of the three patients.
- A description of an experiment that can be performed to test your hypothesis.

Contents and Costs of Records

Individual records cost \$200.00. This is what is available for each patient:

- Medical History—information on lifestyle, surgeries, allergies, and past medical problems.
- Interview transcripts—transcripts taken from interviews with the patients after being admitted to the hospital.
- Vitals and tests—Blood pressure, heart rate, blood counts (CBC), blood gases and results from any tests that were run.
- Organ assesment—assesments of kidney, liver, and pancreatic function.

You have been provided with a sheet that describes the contents of each of the records. Your grant provides you with enough money to purchase six of the 12 records that are available for these three patients.

Evaluation Criteria

The performance of your group will be evaluated on the following criteria:

- Your diagnosis for the three patients and the value of the evidence that you have used.
- Your proposal for your experiment.
- Residual grant funds (spending less money gives you a higher score).

Time Limitations

- All information should be recorded on the data sheets provided.
- Your applications are due at [TIME].