

Directions: For scenarios 1 - 4, describe both Type I and Type II errors and describe a potential consequence.

Scenario 1:

A clinical trial of a medical treatment designed to help patients get better

Null: Treatment doesn't work

Alternative: Treatment does work

Type I:

Consequence:

Type II:

Consequence:

Scenario 2: A fire alarm is designed to make a loud noise when there is a fire.

Null: There is no fire.

Alternative: There is a fire.

Type I:

Consequence:

Type II:

Consequence:

Scenario 3: A coin is used to determine which football team will choose to kick or receive.

Null: The coin is fair

Alternative: The coin is not fair

Type I:

Consequence:

Type II:

Consequence:

Scenario 4: A blood test is designed to detect a disease

Null: Patient does not have disease

Alternative: Patient has disease

Type I:

Consequence:

Type II:

Consequence:

For scenario 5 and 6, identify the error (Type I or Type II) and describe a potential consequence.

Scenario 5: A fire breaks out and the alarm doesn't ring.

Null: There is no fire.

Alternative: There is a fire.

Scenario 6: An x-ray machine at airport security says "metal object found", but there is no metal object in your bag.

Null: Your bag does not contain a metal object.

Alternative: Your bag contains a metal object.