

Sample Module name

a **statsTeachR** resource

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Overview

Diagnostic Test

Tool for deciding on something you want to know — the true status of some outcome — based on something you can measure.

- ▶ Deciding whether someone has tuberculosis (the outcome) based on the presence or size of a raised swelling (the test) following tuberculin injection.
- ▶ Deciding whether an infant has phenylketonuria (the outcome) based on the blood level of phenylalanine (the test).
- ▶ Deciding whether an infant has phenylketonuria (the outcome) based on the odor of the urine (same outcome of interest, different test).

The Gold Standard

In evaluating a test, must compare results to some “truth”. This is provided by the best possible test — the *gold standard* or *criterion standard* test.

Why Not Use the Gold Standard?

May be expensive, invasive, or impractical.

- ▶ Gold-standard test for pancreatic cancer involves biopsy of the pancreas;
- ▶ Gold-standard test for Alzheimer’s disease is post-mortem brain autopsy.