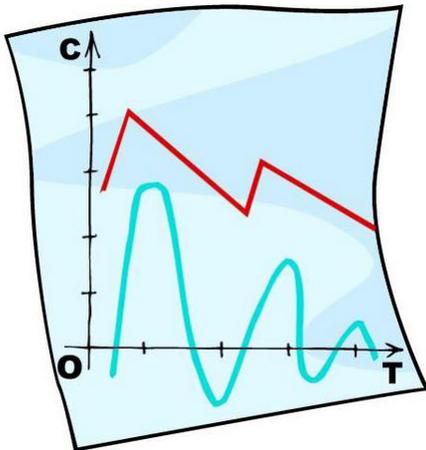


Research on new pharmaceuticals and medical devices typically involves a preclinical stage where basic-science discoveries are made and testing for safety and efficacy is done, often on experimental animals. Then, if things look promising, further study and testing is done in several stages in human subjects (or in animals for veterinary medical purposes).



Scientists base decisions and conclusions on evidence. Very often that evidence is in the form of sets of numbers. It is therefore important to know how to characterize data sets and compare them. Commonly, for example, an experiment will yield one set of data for a treatment and another set for the control group. The key issue is whether these two sets are different (i.e., is there a treatment effect?). Statistical tests are used to determine if data sets that seem to be different really are different.

The Veterinary Black Bag Program

Project Goals:

- Develop Veterinarian's Black Bags (VBBs) of instructional items and pamphlets for middle school teachers to support classroom visits by local veterinarians.
- Provide professional development for veterinarians and teachers on how to use items in the VBBs
- Promote inquiry-based thinking about health-related subjects while emphasizing the value of biomedical research and promoting careers in science.



PEER

PARTNERSHIP FOR ENVIRONMENTAL
EDUCATION AND RURAL HEALTH

Dr. Larry Johnson
Principal Investigator, PEER
979-845-9279
ljohnson@cvm.tamu.edu

Dr. William Klemm
Director, Peer
979-845-4201
wklemm@cvm.tamu.edu

Department of Veterinary Integrative Biosciences
College of Veterinary Medicine & Biomedical Sciences
Texas A&M University, College Station, Tx 77843
MS#4458



<http://peer.tamu.edu/VBB/Summary.asp>

Clinical Trials: Data Analysis

Follow Up Lesson



The instruction in this module includes:
Presentation on *Clinical Trial Process*
Follow-up lessons on:

Clinical Trial Process
Data Analysis
Clinical Trial Business

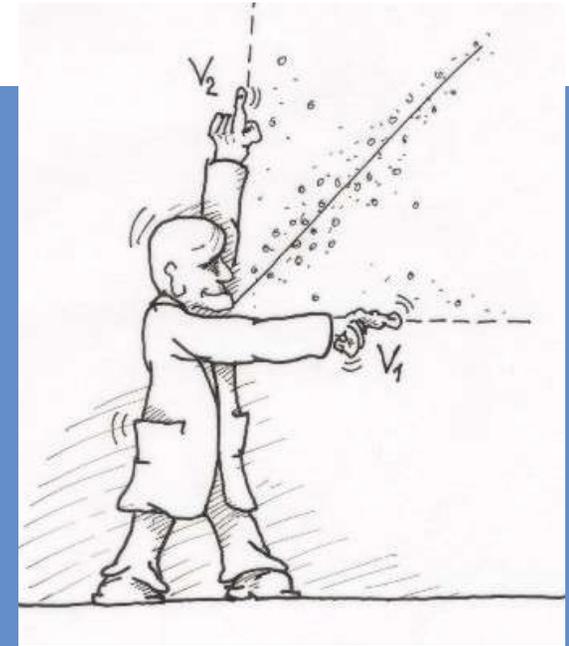
Summary of Lesson Content

This lesson contains a PowerPoint on pre-clinical research and a short tutorial on clinical trial data analysis and an accompanying worksheet. Activity includes using graphs that illustrate the issues in interpreting data that experiments generate.

Objectives

Students will be able to:

1. Explain what is meant by randomized control test.
2. Design a make-believe experiment that is blind. Re-design it so that it is double-blind.
3. Say how average values (or even median values) can mask certain treatment effects.
4. Calculate average, median, and quartile distributions.



Vocabulary

Data set – group of numbers

Quartile – in a data set in which the numbers are rank ordered, the number that represents 25, 50, and 75 percent of all the numbers present.

Decile – as with quartiles, except 10, 20, 30 etc. percent.

