

## **Introduction to Biostatistics**

Data – numbers resulting from counting or measurement. An individual number is a datum.

Statistics – a field of study concerned with

- (1) the collection, organization, summarization, and analysis of data (descriptive statistics);
- (2) the drawing of inferences about a body of data (population) when only part of the data (sample) is observed (inferential statistics).

Sources of Data

- (1) Routinely kept records
- (2) Surveys
- (3) Experiments
- (4) External Sources

Biostatistics – the application of statistical tools and concepts to data derived from the biological sciences or medicine.

Variable – a characteristic that takes on different values in different persons, places, or things.

- (1) Quantitative variable – one measured in the usual sense and conveys information regarding amount
- (2) Qualitative or categorical variable – measuring consists of categorizing and the measurements convey information regarding attribute. Frequencies (or counts) are the numbers we manipulate when our analysis involves qualitative variables.