**Applied Epidemiology I: Spring 2021** Enoch Yi-Tung Chen
**Lab session using Stata** (enoch.yitung.chen@ki.se)
Course website: `https://enochytchen.com/courses/biostatbasics/`

**Lecture 1:** Data management

- Aims
- Good folder structure, documents, Readme.txt, habits on coding
- Other do's and don'ts

**Lecture 2:** Data clearance

- Set up working directory
- Import and save data
  - File types: .xls, .txt, .csv, .dta, .xpt
  - `save, replace`
- Manage datasets:
  `merge, append`
- Get to know the data:
  `summarize, describe, codebook, list`
- Manage variables:
  - Variable types: `numeric, string, keep, drop`
  - Action: `label, rename, recode, generate, replace`
  - Condition: `sort, by, if, in` and other operators

**Lecture 3:** Graphs

- Graphs
  - Bad examples, learning from errors
  - Basics of making graphs
  - Study map
  - Histogram, bar chart, scatter plot, box plot, line graph
  - Customisation: stratification, combine two graphs, export

**Lecture 4:** Summary statistics, tables and interpreting results

- Summary statistics
  - Measures of central tendency: mean, median, mode
  - Measures of dispersion: range, IQR, variance, standard deviation
- Tables
  - Bad example
  - Basics of making tables
  - One-way tables, two-by-two tables
  - Stata tool for Epidemiology
- Basic Epidemiology terms
  - Rate vs. proportion
  - Risk, risk difference, risk ratio
  - Odds, odds ratio
- Interpreting results
  - Principles
  - Ratio $>$ or $<$ 1, more examples
- Calculate ratios using Stata
  - Risk ratio, odds ratio, incidence rate ratio

**Lecture 5:** Q & A session

- Any last statistical questions or clarifications on the halfway of the assignment

**Lecture 6:** Q & A session

- Any last statistical questions or clarifications before the assignment