



# Biostatistics for Research (STATA) Basic/Intermediate

## 10 - 13 January 2022

### Introduction

Participants will be introduced to biostatistical concepts and analysis using STATA for their quantitative clinical research.

### Course Objectives

To equip participants with the knowledge and skills to:

- understand clinical trials and epidemiological designs, sample size calculations,
- design a database,
- perform statistical analysis STATA and interpret the findings of the results obtained from the various analysis.

(NB: **Navigation of the STATA live will not be available during the course.** STATA step-by-step guide will be included in the course notes for all course participants.)

### Prerequisites

- Participants should have statistical knowledge, used STATA and have computer literacy skills such as Microsoft Windows and Excel.
- STATA software is required for participants to practice at their own time after the course.

**(This course is not suitable for beginners in statistics.)**

### Course Outline

#### □ Session 1: STATA Basics

- Setting up a database in STATA
- Importing Excel into STATA
- Merging files
- Basic descriptive
- Graphs
- Computing and Recoding

#### □ Session 2: Introduction to Research Designs

- Randomised Controlled Trials:
  - ❖ Parallel vs Crossover, Randomisation & Blinding
- Epidemiological Studies
- Sample size calculations

#### □ Session 3: Basic Biostatistics

- Univariate analysis
  - ❖ Quantitative Data analysis.
    - Parametric vs Non-Parametric tests
  - ❖ Qualitative Data analysis
    - Chi-square & Fisher's exact tests
    - McNemar test
  - ❖ Correlation
    - Pearson's vs Spearman's

#### □ Session 4: Intermediate Biostatistics

- Multivariate regression
  - ❖ Linear regression
  - ❖ Logistic regression
  - ❖ Survival analysis: Kaplan, Meier & Cox regression

### Course Details

|                 |  |
|-----------------|--|
| Date            | : 10 – 13 Jan 2022 (Mon - Thu)                                     |
| Duration        | : 4 half-days  |
| Time            | : 9.00 am - 12.30 pm   |
| Class size      | : 30   |
| Device required | : Laptop / Desktop<br>(with microphone, speaker and webcam)        |
| Platform        | : Zoom Cloud Meetings  |
| Fee             | : S\$520 (SingHealth)<br>S\$580 (Regular)<br>(inclusive of 7% GST) |

### Target Audience

All Healthcare researchers who wish to gain knowledge on experimental designs, biostatistical analysis and interpretation of the results from the STATA software.

### Teaching Faculty

**Dr Chan Yiong Huak** received his PhD in Mathematics from the University of Newcastle, Australia (1993) and presently is the mentor of the Biostatistics Unit in the Yong Loo Lin School of Medicine, National University Health System, of which he was the head (2004 – 2015). Prior to his previous appointment, he was the head of Biostatistics and Data Management (1997 – 2004) in the Clinical Trials & Epidemiological Research Unit (CTERU), National Medical Research Council (NMRC). Actively involved in conducting research and statistical courses to help researchers in their aims of publication and to enhance their understanding of statistical knowledge. Authored/co-authored more than 500 publications, he also serves as the Specialty (Biostatistics) editor for the Singapore Medical Journal, a committee member of both the Product Vigilance Advisory Committee (PVAC) and the Medicines Advisory Committee (MAC), Health Science Authority (HSA) of Singapore.

### Registration

To register, please scan the QR code or click on the web link. Registration closes on **6 December 2021, Monday**



<https://form.gov.sg/611f3ef9c630de0012ee2ec7>

Upon registration, you agree to PGAHI [Terms & Conditions](#).

### Quick Links

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