**Task: 1. a) Formulate PICO(T) for the clinical question assigned to you,**

 **1. b) Search the literature**

 **1. c) Choose one article of highest methodological value and critically assess it.**

**INSTRUCTIONS**

Revise the following chapters from the textbook “Principles of Research in Medicine”:

Ch. 19 – Evidence-based medicine

Ch. 12 – Information retrieval in medicine

Ch. 13 – Searching medical information on the web

Ch. 4 – Types of study design

Ch. 18 – Critical appraisal of an article

Glossary of terms in the Appendix I will help in understanding specialized terminology.

Revise the following chapters from the Textbook "One stop Doc – Statistics and Epidemiology”:

Ch.6 – Intervention studies – randomized controlled trials

Ch.7 – Metaanalysis

Ch.10 – Estimation

Ch.12 – Interpretation of data

**1. a) Formulating the question**

IN order to search literature, formulate the clinical question according to the PICO(T) model:

***Patient:*** For which patient/population you need the information?

***Intervention:*** The effect of which intervention are you interested in?

***Comparison:*** What is the alternative therapy?

***Outcome:*** What is the effect of the therapy?

(***Type of study):*** Which is optimal study design?

*Example:*

65-year-old man is recovering from stroke. He has confirmed slight narrowing of the left carotid artery by US. Would the introduction of acetyl salicylic acid decrease the risk of new stroke?

**Question:** Can the administration of acetyl salicylic acid in a 65-year-old man decrease the probability of a new stroke?

*Example for therapy:*

**P:** 65-year-old man with a stroke

**I:** acetyl salicylic acid

**C:** placebo

**O:** stroke

**T:** systematic review/Metaanalysis

**1. b) Database search**

The PICO question is the basis for formulating the search strategy because it contains the terms needed for the search. You can use PubMed’s thesaurus– MeSH (Medical Subject Headings) to formulate your key words. MeSH is available at <http://www.ncbi.nlm.nih.gov/mesh>. Brief instructions how to use MeSH are available at: <http://www.nlm.nih.gov/bsd/viewlet/mesh/searching/mesh1.html>.

Using Boolean operators AND, OR, NOT you can broaden or narrow your search and reach the answer.

Pay special attention to the clinical relevance (hierarchy) of different study designs.

We recommend to first search the Cochrane Library.

Examples of key word choices:

*Example for therapy:*

Key words: stroke

aspirin

carotid stenosis

treatment-prevention

Study design: RCT or systematic review)

Enter the databases you searched and the articles you retrieved in the worksheet.

Restrict your search to best evidence.

Search strategy for the therapy example:

carotid AND stenosis AND aspirin AND prevention AND stroke

Limits: Male, Meta-Analysis, Aged: 65+ years

Pay attention to how you write bibliographical references to retrieved articles.

The bibliographical information should contain the following elements:

*Surname, Initial. Title. Journal abbreviation Year;Volume:First page-Last page.*

*Example:*

Klijn CJ, Kappelle LJ, Algra A, van Gijn J. Outcome in patients with symptomatic occlusion of the internal carotid artery or intracranial arterial lesions: a meta-analysis of the role of baseline characteristics and type of antithrombotic treatment. Cerebrovasc Dis. 2001;12:228-34.

**1. c) Critical appraisal**

If you found more articles, choose the one you consider most relevant for your patient. Critically assess it using the guidelines in the worksheet (for therapy/prevention or systematic review/metaanalysis).