Wednesday 8 October

15.30 -16.00 Registration and welcome
16.00-16.30 Diagnosis and prognosis. Learning clinical reasoning. Breakout-sessions. (D. Conte - C. Gluud)
16.30-17.00 Diagnosis: an operative definition. What is diagnosis? Nosography and clinical decision. Clinical reasoning. (A. Colli)
17.00-17.45 Facing C. Difficile. (D. Conte)
17.45-18.15 Prognosis: diagnosing the future. The temporal dimension of diagnosis. Predictive models. (G. D'Amico)
18.15-18.45 Discussion (PG. Duca)
18.45-19.15 The Cochrane Hepato-Biliary Group (D. Nikolova)

Thursday 9 October

Assessment of diagnostic accuracy

9.00-9.15 The cross sectional design study. Population and pre-test. Probability (participants). Index test target condition (disease) reference standard. (M. Fraquelli)

9.15-9.45 Small groups work. To define the participants, the index test, the target condition, the reference standard, and the research/clinical question.

9.45-10.15 Feedback from the small groups. Interactive discussion: the main objectives are defining the question that the diagnostic studies aim to answer and discussing the assumption that the reference standard test is able to exactly identify the target disease, i.e., the problem of 'imperfect' reference standard. (M. Fraquelli)

10.15-10.40 Definition of diagnostic accuracy. The two by two tables. True and false results. (G. Casazza)
10.40-11.00   Coffee break

11.00-11.20 Definition of sensitivity (true positive ratio). (G. Filippini)
11.20-11.50   Small groups work. To retrieve data for the 2x2 tables and sensitivity estimates from published papers. (A. Colli)
11.50-13.00 Feedback from the small group. Interactive discussion: the retrieved estimates of sensitivity; variation of severity of the target condition; diagnostic yield; detection rate. (A. Colli)
13.00-14.30   Lunch

14.20-14.40 Definition of specificity (true negative ratio). (G. D'Amico)
14.40-15.00   Small groups work
To retrieve data for 2x2 tables and the specificity estimate from published papers.
15.00-15.30   Feedback from the small groups. Interactive discussion: the retrieved estimates of specificity; variation of non-affected participants. (G. D'Amico)
15.30-16.00 Likelihood ratios (positive and negative). (G. Casazza)
16.00-16.30   Small groups work. To retrieve the likelihood ratio estimates from the 2x2 tables from published papers.
16.30-17.00   Feedback from the small groups. Interactive discussion: the retrieved estimates of positive and negative likelihood ratios (LR). (G. Filippini).
17.00-17.30 Characteristic of the index test: repeatability and reproducibility, sensitivity/specificity, global diagnostic accuracy and diagnostic odds ratio. (PG. Duca)
17.30-18.00 Lessons learned. (C. Gluud)

Friday 10 October

The Bayesian rule; pre-test and post-test probability; cut-off value; the ROC-curve

8.45-9.00 Introduction.
9.00-9.30 Small groups work . What do you think if the example test is positive or negative? What is the clinical meaning of sensitivity, specificity, or LR?
9.30-10.00 Feedback from the small groups. Interactive discussion. (PG. Duca)

10.00-10.30 What do you talk about when you talk about probabilities? The Bayesian rule. (PG. Duca)
10.30-11.00   Coffee break

11.00-11.30 The pre- test and post-test probability (the positive and negative predictive values). (A. Colli)
11.30-12.00   Small groups work. To estimate pre-test and post-test probability. When is the (post-test) probability enough to decide?
12.00-13.00 Feedback from the small groups. Interactive discussion. Spectrum bias/spectrum variation; the subjectivity of estimates; the assumption of independence of sensitivity/specificity from the prevalence of the target condition; the decisional thresholds. (M. Fraquelli)
13.00-14.30 Lunch

14.30-15.00 Continuous index test results: positivity and negativity criteria. Cut- off value. (D. Prati)
15.00-15.30   Small groups work. To retrieve the defined cut-offs.
15.30-16.00   Feedback from the small groups. Interactive discussion. Explicit and implicit cut-offs. Multiple cut-offs. To rule in, to rule out. (G. Casazza)
16.00-16.30 The receiver operating characteristic (ROC) curve. (G. Casazza)
16.30-17.00   Coffee break

17.00-17.30 The area under the curve (AUC), the comparison of test accuracy. (PG. Duca)

17.30-18.00   Lessons learned. (C. Gluud)

20.30 Farewell dinner

Saturday 11 October

The architecture of diagnostic studies and the systematic reviews and meta-analysis

9.00-9.40 The architecture of diagnostic studies. (M. Fraquelli)
9.40-10.15 The architecture of prognostic studies: differences and similarities. (G. D'Amico - G. Filippini)
10.15-10.30   Discussion (C. Gluud)
10.30-10.50   Coffee break

10.50-11.40 Systematic reviews and meta-analysis of diagnostic studies. (G. Casazza - D. Nikolova - C. Gluud)
11.40-13.00 Examination of the participants.
    Tests: 11.40-12.40.
    Tests evaluations: 12.40-13.00.
13.00-13.30 Conclusions and perspectives. Course evaluation. (D. Conte - C. Gluud)
13.30-14.30 Lunch

Organizing secretary and course information:

Sara Comparetti,
Centro "Thomas C. Chalmers and Alessandro Liberati",
Dipartimento di Fisiopatologia Medico-Chirurgica e dei Trapianti,
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Early application date: until 31 May 2014
Late application date: from 1 June 2014

All sessions will be run in English. Selection will be based on the applicant's curriculum vitae. Applicants will receive a confirmation of acceptance shortly after their application is received so that they can proceed with the payment and forward us a copy of the bank transfer.

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Early registration fee: 750,00 € (until 30 June 2014)
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Applications may be considered after 20 September but acceptance is by no means guaranteed. The late registration fee will apply.

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DIAGNOSIS AND PROGNOSIS: CLINICAL AND RESEARCH PROBLEMS
Basic Residential Course

October 8-11, 2014 - Palazzo Feltrinelli
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