

EAFP Pre-conference workshop on diagnostic test validation

Held in conjunction with the EAFP meeting, Canary Islands, Spain on September 6th

If you need guidance on the best strategies for use of experimental and/or field studies to obtain estimates of diagnostic sensitivity and specificity, and tips for analyzing these data this workshop is for you. There will be approximately 4 hours of lecture/discussion and the remaining 3.5 hours will be problem-based with use of Medcalc (and TAGS) software to analyze data assuming a perfect (imperfect) reference standard. Examples will be based on OIE-listed diseases of finfish, mollusks and crustaceans and participants are encouraged to bring their own data or provide relevant examples for discussion.

The workshop is limited to a maximum of 25 participants, see below for course outline.

The fee for the workshop will depend on room charges and costs for lunch, and number of attendees and has not been finally determined at the time of this posting. Estimated costs for the day are expected to be no more than 50 euros for students and 75 euros for professionals.

Please e-mail the lead instructor, Ian Gardner, as soon as possible, if you are interested in attending so you don't miss out. Further course updates, registration information and will be sent to those that have expressed interest by June 1, 2015:

Ian Gardner, Canada Excellence Research Chair (Aquatic Epidemiology)
Atlantic Veterinary College, Prince Edward Island
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Course Outline

Evaluation of the accuracy of diagnostic tests for aquatic animal diseases: tips, tricks and traps Instructor: Ian Gardner, Canada Excellence Research Chair (Aquatic Epidemiology), UPEI

- 8:00 - 8:30. Introduction: OIE context of fitness for purpose; analytical and other criteria; what's new in test evaluation (lecture)
- 8:30 – 10:00. Test evaluation with a perfect reference standard (field data) – estimation of 95% confidence intervals, receiver-operating characteristic analysis for comparing continuous tests (lecture)
- 10:00 -10:30 Analysis of experimental challenge studies for diagnostic sensitivity – some tips (lecture and discussion)
- 10:30-10:45 Coffee break
- 10:45-12:15 Discussion of participant data sets and hands-on analysis (1.5 hr of discussion/computer lab using Medcalc)
- 12:15-13:00 Lunch
- 13:00- 14:00 Test evaluation without a perfect reference standard (field data) – when is it most necessary and why?; basic principles underlying method, practical example using web-based software (TAGS), example reanalyzed from a Bayesian perspective using prior information (lecture)
- 14:00 – 16:00 Discussion of participant data sets and hands-on analysis ctd. (2 hr of discussion/computer lab using Medcalc/TAGS) including a 15 min coffee break at about 15:00
- 16:00 – 16:30 Design and reporting considerations for diagnostic test accuracy studies (30 min of lecture and discussion)
- 16:30 -17:00 Questions and answers; wrap-up (30 min of discussion)

Note: Participants should bring their own laptop to the course although sharing a laptop with another colleague is also acceptable. We will use the Medcalc software (www.medcalc.org – downloadable free for 15-day trial use) when there is a perfect reference standard and the TAGS software for evaluation of tests without a perfect reference standard (there will be a stand-alone app for this based on the R software). Background powerpoint presentations and a useful reference list covering the main topics will be provided approximately 1 week prior to the course so that much of the workshop can be used for hands-on analysis and discussion of test validation scenarios brought to the workshop by participants.