

Mario Comelli was born in 1953, graduated in Physics in 1977 at Pavia University , specialized in Medical Statistics in 1984. He is associate professor at Pavia University since 2000 and qualified in 2014 to function as full professor of Medical Statistics.

### **Didactic activity:**

1984 - 2000: curricular courses of Probability, basic and intermediate Mathematical Statistics, General Linear Models, Survival analysis and advanced methods of Clinical Trial Analysis at the post graduate school of Medical Statistics - Pavia University.

1991-1996: Medical Statistics curricular course for medical students at the Varese 2nd Medical Faculty - Pavia University

1997 -2000: Statistics courses included in the nursing and obstetrics three-year curricula of the Medical Faculty - Pavia University

2001-2008: Bio-statistics course included in the Bio-technological three-year curriculum - Pavia University

2003-2008: Bio-statistics course included in the Medical and Pharmaceutical Biotechnology two-year post graduate curriculum - Pavia University

2002-2006: Bio-statistics course (held in English) included in the Biotechnology international three-year curriculum - Perugia University.

2005-2010: 2nd Medical Statistics curricular module for the medical students of the Medical Faculty - Pavia University

2009-today Medical Statistics curricular module (held in English) for the students of the Harvey course of the Medical Faculty - Pavia University

2011-today Clinical Epidemiology curricular module (held in English) for the students of the Harvey course of the Medical Faculty - Pavia University

Several short courses (mainly of Survival Analysis) included in master curricula.

### **Research interests:**

I have worked in the fields of psychiatric epidemiology, clinical trial analysis, multiple testing bias correction methods, traffic accident reconstruction and analysis, Monte Carlo simulation to investigate the behaviour of statistical techniques, when used in conditions where their theoretical foundation breaks down (method robustness).

My present research work concerns the application of mixed general and survival models in clinical epidemiology. Attention is focused on the selection and validation of the appropriate models. I currently investigate the numerical as well as graphical ways to extract the maximum extent of epidemiological information from them. The subject specific interpretation of the models' parameters and predictions, in the different fields where they are applied (Dentistry, Infectious Diseases, Nephrology, Neurology, Psychiatry, Physical Rehabilitation etc.) is given the utmost consideration. Models suitable for the analysis of small size clinical trials are given particular thought.

My most recent research interest is the investigation of the clinical evolution of rare genetic diseases

### **Some papers**

a) Comelli M, Morandi A, Magazzù D, Bottazzi M, Marinoni A. "Brightly coloured motorcycles and brightly coloured motorcycle helmets reduce the odds of a specific category of road accidents: a case-control study". *Biomedical Statistics And Clinical Epidemiology* (2008) 2, (1) 71-78.

b) Momjian I, Momjian S, Albanese S, Comelli M, Lovblad K, Sztajzel R: "Visual analysis of semi-automated gray-scaled-based color mapping of the carotid plaque: which method

correlates the best with the presence of cerebrovascular symptoms and/or lesions on MRI?”. *Journal Of Neuroimaging* (2009) 19, 2, 119-126.

c) Bonvin C, Momjian-Mayor I, Sekoranja L, Lövblad KO, Altrichter S, Yilmaz H, Pereira VM, Loulidi J, Comelli M, Burkhard PR, Sztajzel RF: "Stroke severity and residual flow determined by transcranial colour-coded ultrasound (TCCD) predict recanalization and clinical outcome during thrombolysis. *Journal Of The Neurological Sciences* (2010) 296, 1-2, 96-100.

d) Pedrini L A, De Cristofaro V, Comelli M, Casino F G, Prencipe M, Baroni A, Campolo G, Manzoni C, Coli L, Ruggiero P, Acquistapace I, Auriemma L: "Long-term effects of high-efficiency on-line haemodiafiltration on uraemic toxicity. A multicentre prospective randomized study." *Nephrology Dialysis Transplantation* (2011) 26, 8, 2617-2624.

e) Rossi RL, Rossetti G, Wenandy L, Curti S, Ripamonti A, Bonnal RJ, Birolo RS, Moro M, Crosti MC, Guarini P, Maglie S, Marabita F, Mascheroni D, Parente V, Comelli M, Trabucchi E, De Francesco R, Geginat J, Abrignani S, Pagani M.: "Distinct microRNA signatures in human lymphocyte subsets and enforcement of the naive state in CD4+ T cells by the microRNA miR-125b." *Nature - immunology* (2011) 12, 8, 796-803

f) Momjian-Mayor I, Kuzmanovic I, Momjian S, Bonvin C, Albanese S, Bichsel D, Comelli M, Pereira VM, Lovblad KO, Sztajzel RF.: "Accuracy of a novel risk index combining degree of stenosis of the carotid artery and plaque surface echogenicity" *Stroke* (2012) 43, 5, 1260-1265.

g) Notarangelo FM, Maglietta G, Bevilacqua P, Cereda M, Merlini PA, Villani GQ, Moruzzi P, Patrizi G, Malagoli Tagliazucchi G, Crocama A, Guidorossi A, Pigazzani F, Nicosia E, Paoli G, Bianchessi M, Comelli MA, Caminiti C, Ardissino D.: "Pharmacogenomic Approach to Selecting Antiplatelet Therapy in Patients With Acute Coronary Syndromes: The PHARMCLO Trial". *J Am Coll Cardiol*. 2018 May 1;71(17):1869-1877.

h) Luciano A Pedrini 1 , Mario Comelli 2 , Pio Ruggiero 3 , Annalisa Feliciani 3 , Vania Manfrini 3 , Giorgio Cozzi 3 , Angelo Castellano 3 , Mauro Pezzotta 3 , Guido Gatti 3 , Marta Arazzi 3 , Laura Auriemma 4 , Attilio di Benedetto 5 , Stefano Stuard 6 : "Mixed Hemodiafiltration Reduces Erythropoiesis Stimulating Agents Requirement in Dialysis Patients: A Prospective Randomized Study" *J Nephrol* . 2020 Feb 8. doi: 10.1007/s40620-020-00709-0. Online ahead of print