Gianluca Severi, PhD

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Centre de Recherche en Epidemiologie et Santé des Populations
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Senior Research Associate (honorary)
Cancer Epidemiology Centre, Cancer Council Victoria, Australia

Principal Investigator, E4N cohort (www.e4n.fr)

Co-Principal Investigator, E3N cohort (EPIC-France)

Former Director (2013-2017)
Italian Institute of Genomic Medicine, Human Genetics Foundation (HuGeF), Torino,
Italy

Former Deputy Director (2008-2013)
Cancer Epidemiology Centre, Cancer Council Victoria, Australia

Research Interests: cancer epidemiology, research methodology, biostatistics,
epigenetics, bioinformatics

Short training and career description:
I completed my initial academic education in physics at the University of Genova,
Italy and started my career in cancer epidemiology at the local Cancer Centre (IST) in
1995 on a project to create the regional mesothelioma registry. In 1996 I moved to
Milano, Italy to pursue formal training in biostatistics and epidemiology (Scuola di
Specializzazione in Statistica Medica, Istituto di Biometria, Università Statale di
Milano) and to work as biostatistician at the Division of Epidemiology and
Biostatistics of the European Institute of Oncology. During these early years of my
career I conducted ecological studies to investigate the evolution of cancer mortality
and incidence rates as natural experiments and used data from observational studies to
clarify the role of some risk factors in certain types of cancer – for example, to
determine the effectiveness of prevention strategies for melanoma through
international comparisons of mortality rates.

During my doctoral work with the University of Birmigham in the UK, I developed a
strong interest in the use of innovative methods to analyse complex biomedical data to
better understand why and how cancers develop and progress. To pursue these
research interests and study molecular markers of risk in large prospective studies, in
2004 I moved to Melbourne to work at the Cancer Council Victoria (CCV), one of the
leading cancer research and prevention institutions in Australia. During the almost 10
years at CCV working closely with the School of Population and Global Health of the
University of Melbourne I conducted several studies that contributed to identify some
key genetic factors that increase the risk of common cancers such as prostate and
breast cancer.

In 2013, I returned to Italy to take up a research management position as Director of the Italian Institute for Genomic Medicine (ex Human Genetics Foundation, HuGeF), a research institute based in Torino, Italy devoted to innovative and multidisciplinary research on biomedical data science, human genomics and epigenetics.

In 2015, I became Directeur de Recherche at Inserm in France and I took up the role of Principal Investigator of the E4N cohort and co-Principal Investigator of the E3N cohort within which I am conducting studies on epigenetic factors such as DNA methylation that may mediate the effect of environmental exposures on risk of chronic diseases, cancer in particular. Another area that I am developing within the E3N cohort and other epidemiological studies is the investigation of molecular footprints in cancer tissue of the action of environmental exposures and lifestyle that may play a role in cancer development and progression.

Total number of peer-reviewed articles: 265

Personal H-index: 52 (Scopus)

Selected publications for the period 2013-2018:

Perduca V, Omichessan H, Baglietto L and Severi G. Mutational and epigenetic signatures in cancer tissue linked to environmental exposures and lifestyle. Curr Opin Oncol 2018;30(1):61-67.

Baglietto L, Ponzi E, Haycock P et al. DNA methylation changes measured in pre-diagnostic peripheral blood samples are associated with smoking and lung cancer risk. Int J Cancer. 2017 Jan 1;140(1):50-61.

Fasanelli F, Baglietto L, Ponzi E et al. Hypomethylation of smoking-related genes is associated with future lung cancer in four prospective cohorts. Nat Commun. 2015 Dec 15;6:10192.

Johansson M, Fanidi A, Muller DC et al. Circulating biomarkers of one-carbon metabolism in relation to renal cell carcinoma incidence and survival. J Natl Cancer Inst 2014;106(12).

Eeles RA, Al Olama AA, Benlloch S et al.. Identification of 23 new prostate cancer susceptibility loci using the iCOGS custom genotyping array. Nature Genetics 2013;45(4):385-391.