



10° CONGRESSO NAZIONALE



Italian Conference on
AIDS and Antiviral Research

Presidenza del Congresso Massimo Andreoni, Roma Andrea Antinori, Roma Carlo Federico Perno, Milano



Oral Communication

Session/Topic: **HIV epidemiology and prevention**

N. Title:

OC 44 Which is the current risk of tuberculosis in persons diagnosed with HIV in Italy?

Authors:

E. Girardi¹, A. Cozzi-Lepri², A. Gori³, A. Saracino⁴, A. Di Biagio⁵, G. Lapadula⁶, G. Orofino⁷, M. Lichtner⁸, S. Lo Caputo⁴, A. Antinori¹, A. d'Arminio Monforte³, C. Mussini⁹, for the Icona Foundation Study Group

Affiliation:

¹National Institute for Infectious Diseases L. Spallanzani - IRCCS, Rome, Italy, ²University College London, London, UK, ³University of Milan, Milan, Italy, ⁴University of Bari, Bari, Italy, ⁵University of Genoa, Genoa, Italy, ⁶San Gerardo Hospital, Monza, Italy, ⁷Amedeo di Savoia Hospital, Turin, Italy, ⁸Sapienza University of Rome, Rome, Italy, ⁹University of Modena and Reggio Emilia, Modena, Italy

Abstract:

Background: Combination antiretroviral therapy (cART) reduces the risk of developing tuberculosis (TB) in persons with HIV both in low and high TB burden countries. Nonetheless, some studies suggest that this risk may remain above that of background HIV-uninfected populations. It is not clear whether in low TB burden countries the recommendation of guidelines to screen and treat for latent TB infection (LTBI) all persons with newly diagnosed HIV infection is presently justified.

Methods: We analyzed data of persons enrolled in the ICONA cohort in 2006-2017 in Italy, diagnosed with HIV within 6 months of enrolment. We considered cases of TB occurring up to December 2017 and diagnosed at first presentation or during follow-up. Factors associated with presenting with TB at the time of HIV diagnosis (\pm 3 months) were identified by multivariable logistic regression. Incidence rates of TB from the time of starting cART were calculated, and Poisson regression model was used to identify factors associated with the incidence of TB in the study population.

Results: We included in this analysis 7,533 persons with HIV; of them 57% were males and 71.1% were born in Italy. Among foreign-born persons, area of origin was: Sub Saharan Africa 35%, Latin America 27% and Eastern Europe 17%. Overall, 123 TB cases occurred in the study population, the vast majority (84%) being diagnosed at the time of HIV diagnosis. The risk of being diagnosed with TB decreased in individuals diagnosed with HIV in more recent time periods while it increased significantly for those diagnosed at more advanced levels of immunosuppression and for foreign born individuals. Seventeen cases of TB occurred over 19,757 person-years of follow-up (PYFU) among patients on cART for an overall incidence of 0.86 per 1,000 PYFU (95%CI: 0.50 - 0.13) Incidence rates tended to be lower among persons born in Italy, and the highest incidence was recorded among foreign born persons starting cART at low CD4 cells count. In multivariable analysis the risk of developing TB significantly decreased after the first 12 months of cART, while it was significantly higher for foreign-born persons.

Conclusion: Timing of occurrence of HIV-associated TB suggest that promoting early HIV diagnosis and immediate initiation of cART is likely the most important interventions to further decrease the risk of HIV-associated TB in a low TB burden country. Foreign-born persons are at increased risk of presenting with TB and of developing TB during cART.

Additional prevention efforts should be focused on persons born in high TB burden countries and on those diagnosed with HIV at low CD4 level. The effectiveness of screening and treatment of LTBI among persons with HIV from low TB burden countries and with less advanced immunosuppression should be reevaluated.