

## Metabolism alterations in aggressive lymphomas

Pier Paolo Piccaluga<sup>1</sup>, Maria Raffaella Ambrosio<sup>2</sup>, Mohsen Navari<sup>1</sup>, Giulia De Falco<sup>3</sup> and Lorenzo Leoncini<sup>3</sup>

<sup>1</sup>Bologna University School of Medicine, Italy

<sup>2</sup>University of Siena, Italy

<sup>3</sup>Queen Mary University of London, UK

Lipid metabolism alteration have been recently described in human cancer with relevant pathogenetic and possibly therapeutic implications. Our group described specific lipid metabolism patterns in Burkitt lymphomas. We have now extended our analysis to the spectrum of aggressive non Hodgkin lymphomas (NHL) including BL, diffuse large B-cell lymphoma (DLBCL), post-transplant lymphoproliferative diseases (PTLD), and nodal peripheral T-cell lymphomas (PTCLs). Particularly, we performed a gene expression profile-based analysis of 250 NHL cases and 25 samples representative of normal B-cell subsets (naïve, memory, germinal center, and plasmacells). Immunohistochemistry and quantitative real time PCR (RTQ-PCR) were used for validation. We found that BL, DLBCL and PTLD presented with consistent abnormalities if compared to normal B-cell subsets. The specific patterns were associated with clinico-pathological features including proliferation rate and genetic imbalances. Concerning DLBCL, specific analyses were carried out in ABC vs GCB cases as well as based on the genetic profile (double hit lymphomas vs. others). Further, specific attention was payed to EBV-associated tumors since virus can alter the metabolic profile. In conclusion, we identified specific metabolic patterns associated with B-cell lymphomagenesis and particularly those associated with peculiar features such as genetics and EBV infection.

## Biography

Pier Paolo Piccaluga has done MD with honors from Bologna University (1997). He did Specialty in Hematology with honors (2001), PhD in Clinical and Experimental Hematology at Bologna University (2005), Specialty in Pathology with honors at Siena University (2014) and Post-doctoral fellowship at Columbia University, New York (USA). He is a Visiting fellow at Columbia University (USA, 2008) and Kiel University (Germany, 2009), Lecturer in Pathology at Bologna University: 2006-2012. Currently he is appointed as Associate Professor at the Department of Experimental, Diagnostic, and Specialty Medicine, Bologna University Medical School, Italy.

[pierpaolo.piccaluga@unibo.it](mailto:pierpaolo.piccaluga@unibo.it)

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