THE AMERICAN JOURNAL of MEDICINE®

All Patients with Leukemia Are Not Equally at Risk of Contracting *Pneumocystis jirovecii* Pneumonia

To the Editor:

We read with interest the article of Fillatre et al[1] about *Pneumocystis jirovecii* pneumonia in patients not infected with human immunodeficiency virus (HIV).[1] Among those at risk, they define a group called "leukemia." The same amalgam was made in a previous study in hematological patients.[2] It is suggested that among these patients with acute respiratory failure, the diagnostic and therapeutic approaches are based on the attitude, called "DIRECT."[3] It is to analyze the clinical picture from: Delay since malignancy onset or hematopoietic stem cells transplantation (HSCT), since symptom onset and since implementation of antibiotics/prophylaxis; pattern of Immune deficiency; Radiographic appearance; Experience and knowledge of the literature; Clinical picture (including ongoing chemoprophylaxis and effective antibiotic therapy); and findings by high-resolution computed Tomography.

Regarding immunosuppression, it seems perfectly clear that all patients with acute leukemia are not at equal risk of *Pneumocystis jirovecii* pneumonia. It seems necessary to separate patients with myeloid leukemia on one hand, and on the other, those with lymphoid leukemia, acute or chronic, or treated by HSCT. This does not mean that *Pneumocystis jirovecii* pneumonia does not exist in patients with acute myeloid leukemia. In an old study, conducted between 1990 and 1999, among 55 hematological patients with *Pneumocystis jirovecii* pneumonia, only 8 patients suffered from acute myeloid leukemia.[4] Among them, 2 were in induction treatment, 1 in consolidation, 1 in maintenance, and 1 in salvage therapy. The other ones were treated with HSCT. More recently, among 544 patients with *Pneumocystis jirovecii* pneumonia, in the 321 (59%) without HIV infection, only 9 (2.8%) with acute myeloid leukemia consolidation (except HSCT) were considered with this diagnosis.[5] However, other risk factors, mainly corticosteroids, are not reported.

Thus, *Pneumocystis jirovecii* prophylaxis is not recommended for patients with acute myeloid leukemia.[6] We therefore believe that the diagnosis of *Pneumocystis jirovecii* pneumonia should not be part of the initial diagnostic process or therapy in patients with acute myeloid leukemia induction and acute respiratory failure, especially among those critically ill. The pooling group called "acute leukemia" can lead to errors in the management of these patients.

Roux Antoine, MD, PhD[a]
Bornstain Caroline, MD[b]
Vincent François, MD[b]
for the GRRROH
[a]*Centre Médico-Chirurgical Foch Suresnes, France*
[b]*Groupe hospitalier intercommunal Le-Raincy Montfermeil Montfermeil, France*
GRRROH: Groupe de Recherche en Réanimation Respiratoire en Onco-Hématologie (http://www.grrroh.com/)

http://dx.doi.org/10.1016/j.amjmed.2014.09.026

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Funding: None.
Conflict of Interest: None.
Authorship: All authors had a role in writing the manuscript.