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### New opportunities in a personalized approach to the pre-leukemic phase of myelodysplastic syndrome and acute myelogenous leukemia

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The myelodysplastic syndrome (MDS) evolves into acute myelogenous leukemia (AML), it is generally believed that these patients if they survive long enough will eventually transform and in the past named as a pre-leukemic syndrome. Basic knowledge regarding the molecular mechanism of the evolution of MDS into AML, development of epigenetic and immunomodulatory agents in its management may give us opportunities of better management of the disease as well as opportunities to prevention of its evolution to a fatal condition given the right circumstances. Continued improvement in classification and prognostication by inclusion of new data including cytogenetics and molecular markers, we are now able to tailor specific treatment for subgroups of patients leading to a more specific and personal approach to their management. Patients with del5q-cytogenetics responsive to a specific immunomodulatory agent called lenalidomide. MDS which for the past decade had no standard therapy has now shown a doubling overall survival with azacytidine. Meanwhile in AML, a completely different approach such as using a retinoid and arsenic trioxide can now cure some patients with acute promyelocytic leukemia (APL) with the translocation 15;17 and those with core binding factor chromosomes such as inverted 16 as a good prognostic marker treated specifically with standard induction and high dose cytosine arabinoside consolidation. The intermediate group in AML with normal cytogenetics is a mixture of good and bad prognostic patients and with the help of molecular markers such as FLT3/ITD and NPM markers. We can also identify up front patients who will not respond to our available therapies and should be prepared early for possible hematopoietic stem cell transplantation.

#### Biography

Emmanuel C Besa completed his MD from the University of the Philippines, College of Medicine, finished his Postdoctoral studies from the University of Pennsylvania at Presbyterian Medical Center in Hematology and Oncology. He joined the faculty of the Medical College of Pennsylvania and was promoted to Full Professor in 1994 with tenure in 1995. He moved to Thomas Jefferson University as Professor of Medicine and Medical Oncology, Division of Hematologic Malignancies and Hematopoietic Stem Cell Transplantation program. He was in the Educational Committee of the American Society of Hematology and was awarded the MDS Center of Excellence by the MDS Foundation. He recently retired from his academic position in June 30, 2013 but continues to conduct CME lectures and is the Hematology Editor of *Medscape Emedicine*.

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